

A  
T R E A T I S E

ON THE  
CAUSES AND CURE

OF

S W E L L E D L E G S;

ON

DROPSIES,

AND ON THE

MODES OF RETARDING THE  
DECAY OF THE CONSTITUTION.

IN THE

*DECLINE of LIFE;*

WITH THE DESCRIPTION OF A

NEW-INVENTED INSTRUMENT

*For drawing off the Water, in Female Dropsies, &c.*

BY

WILLIAM ROWLEY, M. D. 1742-1806

Member of the University of Oxford, the Royal College of Physicians in London,  
and Physician to the St. Mary-le-bone Infirmary, &c. &c.

TO WHICH IS ADDED,

A T R A C T

On the absolute Necessity of Encouraging the

STUDY OF ANATOMY, &c

To supply the Army, Navy, and Country, with skilful Physicians and  
Surgeons, &c.

ADDRESSED TO THE

LEGISLATURE OF GREAT BRITAIN.

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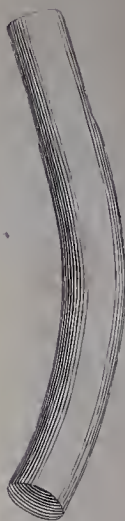
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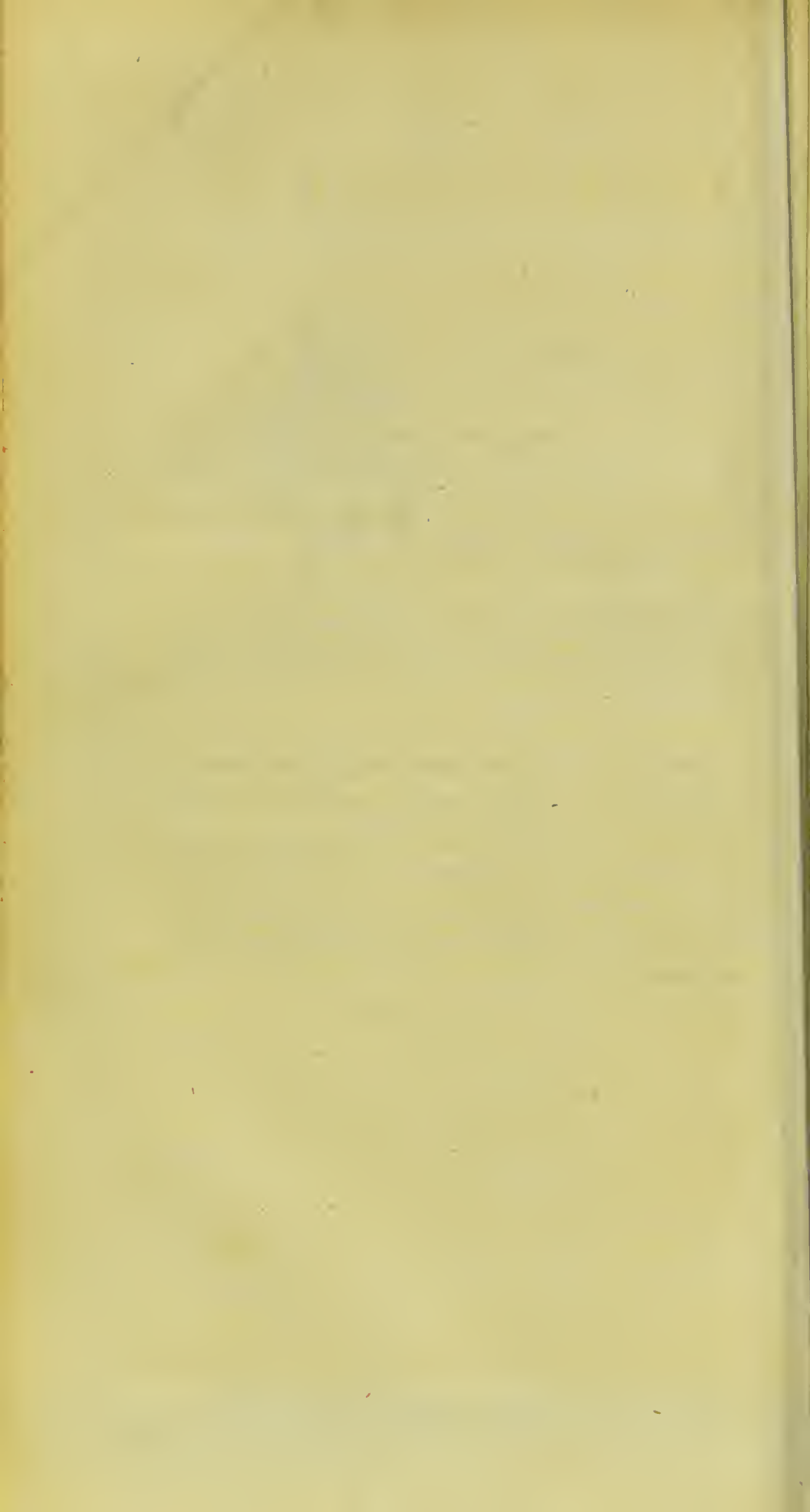


## REFERENCE TO THE PLATE.

*The Silver Tube, which should be ready to pass through the canula of the trocar, in operating for the dropsy of the female ovarium, &c. The trocar should be large, with Mr. Savigny's late improvement in the canula.*

*A little curved Tube, that fits the canula, to facilitate the evacuation of the fluid, whether it be serum, coagulable lymph, or thick, ropy pus, &c.*

*The circular end of the auxiliary tube, which passes through the canula, should be rounded, and very smooth; thus it might be useful in the ascites, and less likely to injure the omentum, or surface of the intestines, than a probe, &c.—The place for performing the paracentesis has lately been changed by some skilful surgeons, and the puncture is made under the umbilicus.*



# INTRODUCTION.

CONTAINING SOME GENERAL REMARKS ON MEDICINE, AND ON THE PRESENT TREATISE  
IN PARTICULAR.

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WHOEVER has united great experience and observation in the practice of medicine to previous theory, founded on facts, and who comprehends the judicious application of remedies to various diseases, constitutions, seasons, and climates, may be justly nominated an experienced and learned physician. It is possible, however, that a physician may grow very old without true medical science : for by credulity and a blind obedience to systems and professors; studies may commence in error, the practice of physic may continue in error, under the baneful influence of prejudice, and the artist may die in error without discovering many professional absurdities.\* The works of *Hippocrates*, *Galen*, and *Celsus*, were implicitly obeyed for several centuries, as the most perfect models of all medical knowledge ; the approbation of ages sanctified the delusion, and destruction awaited, whoever doubted their doctrines ; this is a striking proof that many hundred years expe-

\* In France, Italy, and Germany, except at Vienna, I have seen many physicians of this description, and not unfrequently in other countries.

rience did not form skilful physicians. Dull commentators wrote huge volumes in defence of numerous falsehoods, and unsuspicious students and practitioners submitted to be governed by those ancient oracles of supposed medical erudition, without due reflection. The whole study of medicine and philosophy consisted in knowing what *Hippocrates*, *Aristotle*, and *Galen* said, or in furious contentions on what they meant; not whether what they said was true, consistent, or useful. Thus did ages pass away with little improvement, and few discoveries. The practitioners of physic in those ages often grew old in the art with a paucity of knowledge; confidence was placed in these veterans in proportion as their hairs became grey, or their heads appeared bald; yet the greatest part of their experience consisted in watching and minuting down the progress of disorders from *health* to *death*, without being able to preserve the former or prevent the latter; hence their accurate clinical observations on the *fate* of diseases. A credulous attachment to the ancient precepts of the art, a disinclination to investigate or expose defects, and sitting down indolently contented with the fashionable practice of the day, however exceptionable, led the major part of medical practitioners peaceably through life; while the ardent labourers to improve science, being few in proportion to the number of the former, were opposed, injured, calumniated, and often treated as enemies to society, though their envious opponents justly merited that title. The great Harvey, the discoverer of the



the circulation of the blood, which laid the foundation of the present improved state of physic, was oppressed and vilified by his cotemporaries, in most parts of Europe, for nearly a period of thirty years. Corporate bodies, universities, colleges, individuals supposed learned, all united, to their immortal reproach, to argue violently against demonstrative facts and truths; indeed, so vehement did they seem, that an observing spectator would have supposed, the whole commonwealth of physic depended entirely on falsehood for its support. Thousands of such faithful adherents to temporary prejudices, who furiously resist every new improvement, have ever existed, and will exist: they commence the practice of medicine with a vicious and arrogant supposition that what they have read, or have been taught, at college, comprehends the utmost extent of this humane art, and such men, framed with such contracted minds, were they to live for ages, would live without any benefit from experience. To correct this class, universities should be reformed, ancient abuses abolished, and all the institutions of medical learning be established *de novo*.

To shew the wavering inconsistency of the art, the dogmatical, pneumatical, and empirical sectaries mentioned by *Celsus*, and the corpuscularians, chemical visionists, geometrical, mathematical, mechanical physicians, and the eclectics, with a variety of others amongst the moderns, might be introduced. As to individual absurdities, they have been innumerable in every age, and remain in fashion for a

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time.

time. How is this to be accounted for? From the want of due reflection, and from implicitly assenting to principles, neither fully proved, nor demonstrated. In short, few men, either from incapacity or idleness, seriously study, or think for themselves; most run with the stream, however sullied by impurities, and become irascible, on being apprised of the truth.

Practitioners in medicine, who merit the name of skilful and experienced, are those, who by long study and reiterated reflection are able to examine medicine in all its parts with their own eyes, and who exert their intellectual faculties to discover and separate truth from conjecture, facts from their semblance, true theory from false hypothesis: men, who are too honourable to deceive, and too sensible to be deceived. An uncultivated mind, inadequate to the examination of professional novelties, by just analogy and sound reasoning, is incapable of forming a true estimate of the excellence or defects of any discovery promulgated; its possessor is as likely to be influenced by the visionary projects of inexperience, as by the profound erudite intelligence of the most learned and judicious observer. The obscure crudities and irrational devices of men, who have not practised the art sufficiently long to comprehend either its present healing excellence, or its deficiencies, could never gain *pro tempore*, such numerous votaries to unintelligible systems of design or ignorance assuming the mask of wisdom, were mankind not more influenced by plausibilities, than



than by solid judgment. To strip off this veil of error it is expedient to advert to *first principles*; examine these minutely and impartially; if they may be admitted as truths, there is probability that the superstructure may be permanent: but if the experiments on which hypothesis be built, should be verbally obscure, dubious, or false, whatever may be rashly asserted, on such conditions, should be suspected by every admirer of truth. It is inhuman to sacrifice human lives at the shrine of conjecture. No doctrines should be admitted in medicine, but well established anatomical, physiological, or practical facts; such as when known and perfectly comprehended, by the evidence of the senses, or by just reasoning and reflection, must obtain assent. There are already sufficient truths, on which a rational and satisfactory theory and practice of medicine may be formed, without having recourse to stratagems, quaint phraseology, or that old device of giving words for things; words, which neither the authors themselves, nor the deepest philologists can satisfactorily define, and on which, perhaps, there are a variety of opinions; but as opinions prove nothing, they are inadmissible, if attempted to be applied to the practical modes of cure. A late professor of medicine, whose doctrines appeared unintelligible to a professional man of no mean capacity nor learning, was asked, in what point his principles differed from the great Boerhaave? what were his meanings in different parts of the lectures he delivered, for they appeared incomprehensible?—The professor answered

answered—" he was not surpris'd, for he never " understood them himself."—Notwithstanding this, he held the highest rank for profound knowledge amongst the unsuspicious novices who attended his lectures, and they returned home fully satisfied they had reaped an uncommon harvest of science from his mysterious, incomprehensible jargon, joined with the common practice of the times arranged differently from his predecessors and contemporaries. It is time, however, that medicine should emancipate itself from such temporary delusions, from such mean artifices, which have too often, and too long diverted its attention from truth and objects of the highest importance. A practical knowledge in medicine can only be obtained by a constant and long attention at the bedsides of the sick ; by dissections *post mortem*, by reflecting on the adequacy or inadequacy of remedies applied to diseases, by perfectly comprehending the power or force of medicines in various cases and constitutions ; by an unprejudiced observation and comparison of the different methods of treatment adopted ; by a sagacious discrimination to select what is only efficacious and actually useful, and rejecting what is trivial, dubious, or dangerously empirical ; by being cool and cautious, but always open to truth and conviction ; by never drawing general inferences from singular and partial, or extraordinary events. Such are the outlines that have been inculcated in *Schola Medicinæ*, &c. but neither the chemical laboratory, the products of fire, nor the whimsical conceits of visionists, nor pseudo-

pseudo-philosophers, afford these advantages, but the practice of great hospitals, conducted by men of experience, possessing liberal science, and an ardent zeal to promote the great objects of the healing art, and the welfare of all society.

Every medical treatise deserving attention should contain some new practical observation, or useful discovery; for neither mankind, nor the salutary art, are interested in the repetition of doctrines universally known. Physicians of learning and long experience, if not biased by prejudices, nor fleeting hypotheses, are most capable of giving useful instruction; for they have the greatest opportunities of perceiving the full extent and power of the art, and do not, like the inexperienced, give implicit credit to impossibilities; neither are they charmed with the frothy effusions of fugitive speculations, nor the indeterminate, ambiguous hypotheses of novel adventurers. Past experience leads to a knowledge of the probability or improbability of new doctrines; analogous reasoning frequently clears up doubts, and solid, indubitable truths are alone admissible in experienced, cultivated minds. Diffidence, however, and the apprehension of illiberal censure, deter many excellent practitioners of great experience from communicating discoveries of the utmost utility, and thus society loses the advantages of their judicious studies. The virulent opposers of science do not reflect, that while they only intend personal injury, perhaps, to a successful rival, they

3 commit



commit universal mischief. Men, who only advance to mediocrity, seldom disturb the tranquillity of the interested, vain, self-important, or ambitious; but a great reputation acquired by industry, must ever expect the dark stabs of indolence, mean talents, and contracted minds. Fortitude in a just and honourable cause, and in the support of true principles, bears down, like a torrent, all opposition; but without firm resolution and perseverance, the most ingenious inventions may prove futile, or be rendered useless by the low stratagems of envy and artifice. To rest satisfied, however, with medical error is vicious; to explore and remove defects laudable; to conceal, through timidity, beneficial discoveries is pusillanimous and inhuman.

The serious consequences of inattention to drop-fical swellings of the legs when recent, and the fatality of dropfics when confirmed, have urged the necessity of attempting to fully explain their various causes; from which *data*, it is presumed, methods of prevention and cure, superior to those in general estimation, may be established.

In the subsequent treatise investigations from the appearances of the dead are more depended on than many specious hypotheses and systems of authors. The injuries different functions and parts suffered, previous to death, are rationally explained from evident anatomical facts, to which are subjoined physiological observations illustrating the principles advanced.

A view of the parts of morbid bodies compared with those, who die by accident in sound vigorous health, demonstrates the nature and extent of disease, to those accustomed to these scrutinizing pursuits; it gives a confidence and satisfaction in practice to the possessor of such knowledge, which none but the votaries to anatomy can conceive; it forms the basis of all true medical science, without which, the whole art would be fable and conjecture, and all difficult cases misapprehended, or often injuriously treated. Most hypotheses from other principles are frequently ideal, anatomical facts are real, and in proportion as these studies become more extensive, the art will approach nearer to perfection.

The ultimate intentions of this work are, to prevent confirmed dropsies, by promptly removing the first apparent symptoms, and to cure hydropic affections by the most powerful and decided remedies. The theory is founded on facts and inductive reasoning; the success of the curative methods, on the result of thirty or forty years accurate observation. Speculations, or conjectures, are rarely admitted in any part of the treatise; for however speculations may be amusing, cures alone are convincing.

The explanation of the anatomical structure of the different parts of the body subject to the present disquisition appear expedient; for, by this means, the causes of œdematous swellings of the legs, dropsies, and that declining state of the human body, which has been nominated, the breaking up of the

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constitution, will be easier comprehended. The method pursued in this performance has been adopted in most diseases contained in the *Rational Practice of Medicine*, particularly in the treatises on female, nervous, bilious, apoplectic, and paralytic complaints, madness, the gout, putrid sore throat, fevers, &c. The favourable reception of those volumes has been a strong inducement to impel the publication of these observations, and they are submitted, with the greatest respect, to the serious and candid consideration of the medical profession.

Amongst several new observations on dropfies of different parts, that of the *ovarium* of females claimed particular attention, as this species has been imperfectly understood; all that is found advanced on the subject, is the result of anatomical scrutiny on a variety of subjects which occurred in private practice, or in the St. Mary-le-bone infirmary, where many dropfical cases are constantly under cure, as well as most acute and chronic disorders. The symptoms of the ovarian dropfy are pointed out to prevent some of those fatal mistakes that have happened in practice, and a new-invented instrument for assisting the operation of the *paracentesis* in the dropfy of the ovary is described by a plate, &c.

The recent proofs of the public military and naval service being destitute, in many instances, of skilful practical surgeons, and a bill having been brought into the Honourable House of Commons, which, if passed, would have established ignorance by the laws of the land; it was thought highly necessary



ceffary to offer fome obfervations on thefe important fubjects, and by perfonally applying to many Honourable Members of the legislative body, the author hopes he has convinced every liberal mind, of the abfolute neceffity of encouraging, inftead of impeding, the ftudy of anatomy. The fhort pamphlet, refpectfully prefented to every individual Member of the Legiflature, is now publifhed, with fome few additions. It is hoped this little offering, for the honour and benefit of the whole profeflion, will be favourably received, and that it will anfwer its fincere intentions in promoting the dignity of medicine and the welfare of fociety in general.

Whoever may defire to be more minutely informed of the appearances after death in every difeafe, and of every part of the human body, may confult *Schola Medicinæ Universalis Nova* lately publifhed in Latin; where is arranged in three columns, correfponding with each other, the whole anatomy, with fixty plates, &c. phyfiology, and pathology, of the human body, on an entire new plan, to abridge and facilitate the ftudy of medicine.

In the fhort tract on the decay of the conftitution in the decline of life, the different habits of the human body, obferved by experience, have been confidered, and the different treatment neceffary to each has been communicated. To oppofe approaching death, and to prolong life, *prætica eft multiplex*; but fystems of medicine, prefcribing fixed rules of diet, and remedies for the prevention or cure of difeafes, without confidering the corporeal and mental diver-

fity, are vacuous. The state of blood and texture of the solids which give *robustness*, are quite different to those which produce *debility*; the blood of the *pallid* differs materially from the *florid*; the *corpulent* habit from the *slender*; the *exquisitely sensible* and irritable from the *insensible*, flow, and *torpid*. Is it not irrational to treat all these different constitutions by one system? Most states of the blood and fluids can be examined, and separately demonstrated, by simple analysis and experiments, without recourse to philosophic chemistry; but the degrees of human sensibility are best discovered by the countenance and predominating passions. Physicians and philosophers have frequently exerted their faculties to develop the true and occult particles of substances, to give new names to old discoveries; and they have prematurely applied, whatever they have found in inanimate matter to that which is animated. The science of *analysis* and *synthesis*, when limited to absolute facts, merits the highest commendation; but when it is distorted by visionary hypothesis and forced out of its proper sphere to account for the various phenomena in animated nature, diseases and their cure, it frequently oversteps its just bounds. Chemistry affords excellent remedies; but very indifferent reasoners; therefore one hypothesis is continually overturning another.

On these important subjects much more might be advanced; but the limits of the present publication demand the suppression, for the present, of many observations that hereafter may be resumed.

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A

T R E A T I S E,

&c.

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AN EXPLANATION OF PARTS, FUNCTIONS, &c.

**V**ARIOUS experiments prove, that a cretaceous, or a calcareous earth, and glutinous substance, similar to the white of an egg, compose the minutest filaments or fibres of the human body.

II. These filaments or fibres, by attraction and cohesion form a reticulated, or net-like membrane, similar to a spider's web, called *tela cellulosa*.

III. This *tela cellulosa* forming cellulous cavities of various dimensions, constitutes all the parts, with very few exceptions, of the whole human structure.

IV. The compactness, or laxity, the softness and hardness, and the strength, or weakness of most parts

parts depend on the degrees of coherence, and closer or looser texture of the *tela cellulosa*.

V. The cellulous membrane forms the cellular tunics of the stomach and intestines, the coats of arteries, veins, nerves, and lymphatics, all the principal viscera, and cellular membrane immediately under the skin.

VI. This last-mentioned cellular structure is found in most parts, it is spongy and porous, it fills up the interstices of muscles and all the divisions of muscular fibres, and the cells are connected with one another, in such a manner, that, with little exception, the whole body may be inflated.\*

VII. The cells, or cavities of this cellular honeycomb like substance under the skin of healthy persons, is generally filled with an oily fluid, which becoming cold, after death, appears a solid white mass called *adeps*, or fat.

VIII. The quantity of oil, or what appears fat, after death, varies materially in various subjects according as the human bodies are fat or lean; but the former are most subject to dropsy.

IX. While the blood continues in a healthy state, and has its just proportions of serum and crassamentum, or thick parts, the cells of the cellular membrane are supplied constantly with the oil.

\* Every person may have seen that *veal* is blown up by the butchers, which is nothing more than distending this membrane by air, and the human body is often bloated to an uncommon degree from poisons, &c. called *emphysema*, in which, if universal all this membrane, or rather its cells, are over-distended with air making the body huge in size.



substance from the mouths of arteries opening in the cellulous cavities.\*

X. But if the blood be greatly deprived of its *red particles*, and *gluten* or *albuminous particles*, by hæmorrhage or any other cause, and *perspiration* and *urine* be diminished, and of course their watery saline particles be retained in the constitution, the cells in the cellular structure soon receive and convey a serum, as in the anasarcaous dropsy, instead of oil or fat, in a fluid state; the cells relax, become larger and larger, the body swells with water, and sits on pressure, and the blood vessels contain a superabundance of water, or serum in proportion as the gelatinous coagulable and red particles are diminished.†

## XI. Ar-

\* This is a modern discovery, and demonstrated since the time of Boerhaave. See *Schola Medicinæ Universalis Nova*.

† Some who are fond of cavilling, assert, that the blood still preserves its quantity of coagulum and red particles in dropsy, and that there is only a greater proportion of serum retained in the body; but it should be observed, that in uterine or other hæmorrhages, where an immense quantity of blood is lost, watery blood is frequently the immediate consequence. No *practical physician* who sees the quantity of red blood and coagulable particles lost by hæmorrhages, will doubt a moment in asserting that the blood of such extremely pallid patients is robbed of red particles and gluten. The including the glutinous particles of the blood with the red, renders the propositions clear even to those, who have only observed the separation of the blood from bleeding, where the thick parts composed of the red and coagulable particles, on standing, separate from the thin or watery. In dropsies, the former are diminished, and the latter increased to such a degree, that punctures made in the legs will be followed by a gradual discharge of many quarts of limpid colourless fluid. The legs evidently shew that they contain water by their whitish or palish distension, by their sitting on pressure, by their soft spongy appearance, especially towards the evening, after sitting up the whole day with the legs hanging

XI. Arteries bring the fluids to the cells, and absorbent or inhaling veins carry back the superfluous fluid again to the blood, a part of which is daily thrown out of the body by perspiration and urine in health; but if the arteries pour forth more fluid than the veins absorb or return, which is evidently the case in cellulous dropsy, the bulk of the body enlarges, and if what should be evacuated by perspiration and urine be retained, and superadded to the watery fluid already contained in the relaxed distending cells of the cellular membrane, the watery inundation, if not evacuated, by some means, must increase. These changes are *partial* in the œdema or swellings of the legs, which only extend to the knee; as likewise, in many other local watery swellings; but nearly *universal* in the dropsy called *anasarca*.

XII. There are various cavities in the human body besides the cavernous, adipose, and minute cells already mentioned; these are chiefly the ventricles of the brain, between the heart and pericardium, the cavities of the thorax and abdomen, &c. From the surfaces of these cavities continually issue, through the mouths of minute arteries, fine watery fluids, after the more *albuminous* parts of the serum have supplied fresh nutrition to the solids; these moisten the surfaces in form of a vapor, called *arterial exhalation*;

hanging down. Punctures made in the legs of healthful persons are never followed by large discharges of *serum* or water, but by red blood in a few drops, which presently stop, and the puncture heals by what surgeons call the *first intention*.

what



what is superfluous transudes or is absorbed by absorbent vessels, and is carried back to the blood, called *inhalation*.\* This *exhalation* and *inhalation* are in *equilibrio*, and are performed without impediment, in health, and consequently no accumulation of fluid happens in the cavities; for all the superfluous particles are promptly and continually attracted and returned. If the exhalation should exceed the inhalation or absorption, that is, if the absorbents, or inhaling vessels should not attract, sponge up, and carry back all the superfluous moisture, or fine aerial vapor, some fluid must necessarily be deposited in the cavity, which daily accumulating, causes the dropsies of cavities, such are;

The *Hydrocephalus internus*, or watery head internally, from *increased serum* in the ventricles of the brain.

*Hydrops pericardii*, or a watery superabundant accumulation between the heart and pericardium.

*Hydrothorax*, or water in the chest.

*Ascites*, or water in the cavity of the abdomen.

*Hydrops uteri*, or dropsy of the womb.

*Hydrops ovarii*, or dropsy of the ovarium, &c.

XIII. The lymphatic vessels absorb and convey to the blood a nutritious, albuminous, *coagulable lymph*, or glutinous fluid, if health be present, and the blood should possess its due and proper consistence. This viscid mucilaginous fluid constantly flowing from all the lymphatics to the thoracic duct, &c.

\* This vapor may be seen on opening animals just killed, as oxen, sheep, &c. in the winter season.

and there mixing with chyle, greatly assists in preserving the just *crasis* of the blood, and is of principal use in continuing the firmness of the body by constantly affording gluten to mix with the new chyle and blood. If the blood should degenerate, and *serum* or water predominate, the lymphatics are partly empty, or absorb and convey only a poor *serous fluid* like water.\*

These facts, assertions, and reasonings, will be perfectly comprehended and acknowledged by all medical practitioners, who have had long experience in the art of medicine, and who have sedulously studied and acquired a competent acquaintance with modern anatomy and physiology.

\* It is from this circumstance that anatomists are enabled to inject and fill the real lymphatic or absorbent vessels with quicksilver by means of a glass tube, and it is for this reason that dropical subjects are chosen to demonstrate the lymphatic system: for, if the coagulable lymph should preserve its natural jelly-like state or consistence at the time of death, which is the case in most, who do not die of dropsies, the fluid in the lymphatics coagulating, prevents the admission of the quicksilver, or any other injection. These lymphatic vessels are obliged to be injected from their small branches towards their trunk; for, like sanguiferous veins, the valves of these vessels prevent the injecting them from a trunk to the minute branches, which every learned and practical anatomist well knows.

ON THE PREDISPOSING CAUSES OF SWELLINGS OF THE  
LEGS, DROPSIES, &c.

I. MORBID affections and relaxations of the stomach, intestines, or liver, by depraving the chyle, may destroy, in certain degrees, the due consistence of the blood, as likewise,

II. Great losses of blood by hæmorrhage, whether from the nose, lungs, stomach, uterus, bladder, or *per anum*, as in the profuse bleeding piles. Profuse reiterated bleedings, with a low watery diet, practices that some foreign physicians and men-midwives are much attached to in disorders that neither require the lancet, nor anti-phlogistic regimen, are frequently the cause of ferous states of the blood, which become the predisposing causes of incurable dropsies.

III. An impoverished diet with little exercise, and confinement in close places, where a pure air does not circulate, will often break down the due consistence of the blood. Œdematous swellings, that pit, on the legs, and a loose, fallow, spongy habit, are not uncommon amongst the symptoms of sea scurvy, and in prisons similar appearances prevail. The sedentary, indolent, and persons prone to corpulency, likewise, are particularly subject to hydropical complaints.

IV. Previous diseases that break down the just *crasis* of the blood, as fevers, diarrhœa, or purging, dysentery, violent perspirations, and copious salivations,

tions, have all consumed the adeps in the cellular texture, and in its place a *serum* has been produced. A long continued habitual asthma generally terminates in swelled legs and dropsy. Numerous, therefore, are the causes that produce a watery state of the blood and other fluids, and relaxation of the solids, all which should be removed, as early as possible, to prevent fatal consequences.

ON THE EFFECTS OF A DIMINUTION OF GLUTEN  
AND RED PARTICLES OF BLOOD, AND ON THE  
INCREASE OF SERUM.

THE effects of a serous state of the blood are evident, by considering that the blood is deprived of those glutinous or albuminous particles similar to the white of an egg, which, in sound health, afford daily nutrition and robustness to the solids. The blood cannot, under such circumstances of depravation, transmit by the arteries to all parts requiring gelatinous nutriment, what it does not itself sufficiently possess; relaxation, therefore, of the whole cellular structure, which actually composes nearly the whole human body, in a greater or less degree, in proportion as the disorder may be partial or universal, recent or long confirmed, must be the absolute consequence.\* A sound, healthful body re-  
ceives

\* In the treatise on diet, volume the fourth, of my *Rational Practice of Physic*, concerning nutrition, and all the different species



ceives daily supplies of those gelatinous or albuminous particles, by the minute arteries which repair the daily loss or consumption, and as long as the supply of albuminous particles conveyed by arteries, uninterruptedly continues, health is present; the natural, vital, and animal functions, as far as they depend on the red, glutinous, and balsamic particles of the blood, are performed without molestation. It is easy from anatomical facts, reflection, and just reasoning, to conceive how a morbid change of those conditions, so necessary to life and health, may debilitate the habit, pervert all the secretions and excretions, and the principal functions of the animal machine; the most important of which shall be briefly enumerated: it will then be made clear to every capacity, how a deluge of water predominating in the constitution, the destruction of the oil, and the diminution of glutinous fluid and red particles, may operate on human beings labouring under dropsies.

cies of foods and drinks in use; it is clearly proved that a mutation of particles composing the whole human machine happens daily, may constantly, as long as the free circulation of the blood and health continue: that is, the particles of matter which occupied any given space this day, occupy another to-morrow, and are succeeded by others; all the parts, therefore, of the human body, during healthful life, undergo a perpetual change, there is a constant loss of the old, and a constant supply of new particles, and all are in continual motion.

ON THE APPEARANCES OF DROPSICAL DISEASES  
AFTER DEATH.

IT is by examining diseases after death that may be discovered what happened in life ; by such means may the true sources of disease be satisfactorily traced. No methods of ascertaining facts concerning diseases are equal to the accurate and skilful dissection of dead subjects. Anatomical scrutiny leads to truth, and overturns all imaginary conceits. The adventurous fabricator of plausible hypothesis, however admired by the indolent, credulous or unlearned, falls into immediate disrepute on being examined, and exposed by the piercing eyes of anatomy and truth. None but those who are ignorant of its real advantages, or who have been averse to the practical studies of the dissecting room, or who have been educated where opening subjects is not allowed, ever deny its great utility and importance. A practitioner in medicine, who is a complete anatomist, and has acquired science by actual and frequent dissections, which is the duty of all who profess the art, sees diseases in the clearest point of view, and is often enabled to discover many intricate cases, and to combat prejudices by indisputable demonstrations, and may, with propriety, endeavour to chase from the medical art, all those idle, useless, and unsatisfactory hypotheses, which partial science, or prejudice, artifice, not truth, hath invented, and credulity, or indolence have too often, unthinkingly,

*pro*



*pro tempore*, adopted and promulgated. After this short exordium to inculcate in students a thirst for real, not imaginary knowledge, the appearances after death of dropfical cases shall be faithfully related, with practical reasonings. The facts exhibited are not taken from a few, but from a great number of dissections, made either by myself, or under my inspection; and the progress of the diseases, previous to death, I had accurately observed. Some of the morbid appearances of the viscera are common to other chronic disorders, as the gout, asthma, &c.; but it frequently happens, that those very disorders terminate in dropfy.\*

From

#### \* DISSECTIONS, &c.

#### OBSERVATIONS.

In the *anasarca*, &c.

The cellular adipose membrane immediately under the skin and all the interstices of muscles only containing in its cells *serum* or water, instead of congealed fat, or *adeps*; and in some few instances a serum united with a more glutinous fluid, and in very rare instances a jelly-like substance rather coagulated and hard in the cells, or cavernous receptacles. Local œdematous swellings are similar.

In the *anasarca*, many instances have occurred of gangrene, from punctures in the legs, scrotum, and penis,

All muscles, muscular fibres, &c. lose in certain degrees their warmth from the absence of fat, as likewise their firm support from the laxity and enlargement of the cells; from hence coldness and debility in universal dropsies, particularly in the extremities. By pressure, what is contained in the cells may be discoverable; the most soft and flaccid, pale and coldest, is *limpid serum*; what is a little harder, arises from a mixture of *gluten*, *serum*, and a *little oil*; what is hardest is coagulable lymph stagnating in the cells: this species, the most rare, more strongly resists pressure. These facts distinguish the differences in cellulous dropsies, which numerous dissections and practice have afforded me the opportunity of ascertaining.

The depraved state of the blood and fluids account for these consequences from punctures, &c. when dropsies have been long confirmed. The cells being emptied of the water by puncture, they are exposed to

From what is demonſtrated by anatomical reſearch, it is not difficult for thoſe who have conſidered the human

## DISSECTIONS.

nis, when the latter have been œdematous and much tumefied.

Theſe have been the uniform appearances in cellulous dropſy, except, when it had been complicated with aſthma, in which inſtances ſuffocation has been produced by *inſpiſſated mucus* in the bronchial veſſels.

In the watery head.

In the hydrocephalus ſerum has been between the cerebrum and membranes, and ſometimes between the dura and pia mater; but never between the dura mater and bones of the cranium.

In the *hydrocephalus internus* of the ventricles, principally happening to children, water, or ſerum, but never *coagulable lymph*, is found in the ventricles of the brain, to the amount of two, three, four, or ſix ounces; and in ſome inſtances to nearly two quarts, which happened in a boy who was remarkably acute, with a head of uncommon ſize, but died of this diſorder.

In

## OBSERVATIONS.

to atmofpheric air, and ſoon ſucceeds mortification. The old method of making large openings in abſceſſes has been productive of gangrene or a very tedious cure. This was one of the firſt errors I diſcovered, when a very young man, and a ſtudent in ſurgery. I am happy to find that a more humane treatment has been adopted by all ſurgeons, who are not prejudiced in favour of ſome of the old barbarous doctrines, in which it was common to cut large pieces out from any conſiderable abſceſs.

The accumulation of ſerum between the pericranium and ſcalp, rarely or never happens, but between the cutis and muſcles ſometimes, in which the head and face are greatly tumefied; but this happens more commonly in the eryſipelas than in dropſies, and is curable, by cathartics, or puncture, &c.

When the accumulation of water happens in the ventricles of the brain, which ventricles, by numerous diſſections, I have proved to communicate, death, in general, muſt be the conſequence. No operation can evacuate the water without piercing the cerebrum; it has been attempted, but without ſucceſs. This internal watery head is chiefly known by the *dilatation* of the *pupils*; and ſometimes blindneſs, ſtupor, convulſions, fever, a conſtant ſcreaming or mourning accompany the dreadful diſorder for weeks before it proves fatal: but in a remarkable inſtance none of the uſual ſymptoms appeared, though the diſorder had been increaſing for many years in the caſe which happened at the St. Mary-le-bone Infirmary, that after death was opened.

In

human functions physiologically, to perceive, by inductive reasonings and analogy, the devastations of

## DISSECTIONS, &amp;c.

## OBSERVATIONS.

In *specu vertebrali*, or bony cavity of the spine, great quantities of water have been found; the fat surrounding the medulla spinalis has been nearly consumed, and the cellular coats covering the spinal marrow have been loose in texture, the sheath or vagina of nerves issuing from the spine, and their ganglions, have appeared laxer than usual, as, likewise, the coats of large nerves, as far as these facts could be ascertained.

Children who have been vomited for the whooping cough have died suddenly, and water has been found in the ventricles of the brain.

Children who have been over-fed, until they vomit repeatedly and daily, have died in convulsions, and water has, generally, been found in the head. As to feeding infants, many nurses think they should continue swallowing down food until they bring it up; this is their ignorant criterion of not hav-

ing.

The brain and its membranes, especially in *children*, are relaxed. The difference of proportions of the humidity, found by experiments, between infants and adults, I have mentioned both in the *Rational Practice of Physic*, in the treatise on *Madness and Suicide*, and in the *Schola Medicinæ*, in the last of which is the weight of the brains of most animals compared with that of man. It is proved that the medullary parts of infant brains are very tender, and of course cannot bear concussions and pressure without some present or future injury. The immense number of infantile watery beads, which has exceeded all bounds for these last twenty years, has, in my opinion, arisen from the bold practice of vomiting children in many diseases that might be certainly cured without vomiting. Not only nurses, but mothers, and unthinking practitioners, boldly and rashly prescribe vomits of *tartar emetic*, and *James's powder*, *ipécacuanha*, &c. and if the infants escape the immediate consequences of such temerity, they applaud their wise practices, but never reflect on the fatal consequences; for they often produce, that slow appearing, but incurable disorder, the dropsy of the ventricles of the brain. Vomiting forces the blood up to the head, and, if the fluids forced there, by this violence, be not absorbed by the ferous veins, for we know not of any lymphatics in the brain of human beings, the fine watery particles forced into the ventricles of the brain will remain there, gradually accumulate, and produce the dropsy of the head: therefore, no physician of skill, who reflects, that the brains of children are naturally very humid, in comparison to the adult, and that the bones

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of



of disease much farther than are exhibited by dissection. It is very rational to infer from what is visible,

## DISSECTIONS, &amp;c.

## OBSERVATIONS.

ing starved infants: the sooner such gross errors are abolished the better; but it must be parents who can alone counteract these vulgar prejudices.

The diet of children is rather too liquid; and, if their foods were drier, and more nutritious, the firm fibre would sooner be obtained; the rickets, and other children's diseases, would be prevented, and, probably, in many instances, the watery head.

In the ventricles of the brains of adults, who have died of dropsies, *water* has been found in greater or less quantities; which, in some measure, accounts for the torpor in many instances of dropsy, by the compression of the medullary parts, vessels, &c.

of the cranium are scarcely united, would risk the life of his infant patients by such rough unwarrantable and dangerous practices, although advised by men of specious reasoning and some experience, or by those who will not improve by experience.

In dropsies of adults sensibility is in many instances obtunded; heaviness, dullness, sleepiness, and insensibility, even to torpidity, are amongst the common symptoms of long confirmed inveterate cellulous dropsies; nor can hydropics be impelled to move, though their salvation depends on bodily exercise. This may be accounted for by the relaxation of membranes of the brain and the cellulous tunics or sheaths of nerves, which suffer in proportion as other cellulous membranes. The mind acts sluggishly on the sluggish, bloated, dropical body.

In the first and second volume of the *Rational Practice of Physic*, which treats, chiefly of female, nervous and mental diseases, as they are termed, I have shewn that they are bodily diseases. The earnest mind acting on a diseased body, and the diseased body incapable of obeying the mental wishes. Dejections of spirits, melancholic ideas, or furious ravings and perverted ideas, of various sorts, all arise from bodily affections, as the numerous dissections in the above-mentioned work fully prove. Even the tempers, dispositions, sentiments, and changeable mind of man, depend much on form of body, state of blood, health, and disease, &c. &c. Curing bodily disease often removes what has been nominated, mental affection, which has been proved in numerous instances.

The

It



fible, that all parts must suffer, in certain degrees, from cellular relaxation. Glandular secretion for vari-

## DISSECTIONS, &amp;c.

## OBSERVATIONS.

The appearances in different subjects who died of the hydrothorax, &c.

In the thorax. Water in the cavity, and in the lungs, and mediastinum.

Between the heart and pericardium, sometimes a smaller, sometimes a larger quantity of serum, or water; in other instances, coagulable lymph. By exposing these fluids over a candle in a spoon, serum is found to nearly evaporate, leaving little except a white froth at the bottom of the spoon; but true coagulable lymph, after a little evaporation, coagulates, like the white of an egg, and loses very little by evaporation, except it be mixed with serum. Sometimes there is found a mixture of serum and coagulable lymph, in which case the serum or water evaporates, and leaves the coagulating gluten at the bottom of the spoon. These experiments I have repeated a number of times

It is easy to conceive how a difficulty of breathing may happen from water lying on the lungs and diaphragm. In the dropsy of the chest, when there is a certain quantity of water accumulated, the patient cannot lie down; but is obliged to sit up night and day, in extreme anxiety, very often without, or with very little sleep. The pulse is not so commonly intermittent in the *hydrothorax* as in the dropsy of the *pericardium*. When the water is in vesicles in the lungs, the breathing is very difficult, with intermittent pulse, &c.

If water be in the mediastinum, great pain is felt immediately under the *sternum*, but the breathing is not so difficult.

When the fluid accumulates in any great degree between the heart and pericardium, the pain is excruciating, the pulse always *intermits*, and is feeble; the patient cannot lie down without faintings, and feels a sensation of suffocation, which seems to arise from the great compression of the lobes of the lungs by the enlarged pericardium. The patient is continually restless, full of grief and anxiety, tossing himself into various attitudes in search of ease, which, however, cannot be procured; thus proceeding from day to day, for a considerable length of time, death closes the melancholy scene; for this disorder is *always incurable*. The *hydrothorax* is rarely if ever cured; but the symptoms are not so distressing as in the *hydrops pericardii*. Such are the practical observations in a great variety of cases; many of which have happened at the St. Mary-le-bone Infirmary.

It may be remarked, that when the fluid has been found merely serum, or water, which can be always *evaporated* by heat, that the inhaling arteries had only poured

various purposes must be perverted by a serous state of the fluids. The component parts of glands will par-

## DISSECTIONS, &amp;c.

## OBSERVATIONS.

times on the fluids found in the cavity between the heart and pericardium; but with regard to the fluid in the cavity of the thorax *serum* is, more commonly, found than *coagulable lymph*, or a mixture of both. Probably the mouths of the arteries have conveyed first into the cavity, from their lax ostiola, some of the albuminous particles, which by nature, in a more healthful state, had been intended for the nutriment of the solids; but when the crasis of the blood has become more degenerated *serum* has flowed.

The coats of the aorta, vena cava pulmonary artery and vein all appear laxer in universal dropsies than in any other disorders; and it is rational to suppose all the arterial and venal systems suffer, in certain degrees, from relaxation of their cellular structure.

In the abdomen.  
Hydatids, &c.

Water, or serum, is gene-

forth their limpid fluid, which the absorbent or inhaling veins did not inhale, or absorb: but when pure *coagulable lymph* has been found, it was inferred, that this issued from ruptured *lymphatics*. This circumstance, however, is of little consequence; for the disorder is equally fatal, whether serum or coagulable lymph be diffused in the pericardium. The disorder admits of no remedy; for what means can rationally evacuate the fluid from the pericardium, or if evacuated, will prevent its re-accumulation?

Another cause of gelatinous fluid may be the evacuation of the albuminous nutritive particles through the mouths of the relaxed exhaling arteries.

The *tunics*, or coats of arteries and veins, particularly the cellulous, must suffer in various degrees from the overflow of *serum*, and the decrease of coagulable lymph, red particles, and oil, or adeps. The actions of arteries become weakened, and the coats of veins, from relaxation, carry the fluids circulating from valve to valve with sluggishness, or more difficulty; hence enfeebled, though quickened arterial action, and venal laxity. The increase of the *saline* watery particles in the blood, and the decrease of the *gluten*, may stimulate the heart to frequent, though feebler action; the fluids depraved may circulate rapider,

partake of the debility: The gelatinous, mucal, synovial, salivary glands and pancreas; the mesenteric

## DISSECTIONS, &amp;c.

## OBSERVATIONS.

generally found in the *ascites*, rarely, though sometimes coagulable fluid.

The liver, spleen, and pancreas are often found scirrhus, or otherwise diseased, the gall bladder containing inspissated bile, and the ducts obstructed. The *vena portarum* sometimes varicous, &c. as likewise lymphatics of the liver.

The stomach and intestines relaxed from maceration in the watery saline fluid, or in a fluid of mixed serum and coagulable lymph, brought there by the exhalation of arteries, left there by the absence of absorbing or inhaling powers in the veins. *Tapping* rarely cures, though repeated; because it is always performed too late to prove the foundation of a cure.

The omentum sometimes contains fluid in cysts, but more frequently it is a mere shrivelled membrane without any fat, therefore no warm covering to the intes-

tipper, but not answer any of the purposes of *healthful nutrition*.

The liver being diseased, the bile becomes vitiated; dropsies succeeding jaundice are generally fatal.

The pancreatic juice must have been deficient. What mischief the diseased spleen might have occasioned is unknown, for the use of that viscus is not yet comprehended, but probably it *prepares* the blood for biliary secretion. It is known that all the veins of the principal abdominal viscera carry their blood to the *vena portarum*, and that this vein performs the office of an artery in the liver, that is, carries the venal blood thither for the secretion of the bile; when the blood has lost its grumous parts, a greater quantity of serum must be conveyed, which not being *apt* to *biliary secretion*, that secretion must fail of being perfect, and the small quantity of vitiated bile sent to the intestines will badly perform its office on the chyle, which, from the laxity of the stomach, had been ill digested.

Ill formed chyle, and vitiated bile, with diminished pancreatic juice, and diseased mesenteric glands, must produce *depraved blood*; from depraved blood again all the secretions depending on that fluid must degenerate, this degeneracy must necessarily affect the whole constitution. Such powerful causes partially, or generally acting, must produce injurious, and often incurable effects, if suffered to long continue.

There-



teric glands and the glandular structure for the secretion of semen, must all undergo a diseased change

## DISSECTIONS, &amp;c.

intestines. The abdominal viscera sometimes appear sodden, palish, and soft; if they have been long soaked in the effused dropical fluid.

The tunics of the stomach and intestines appear lax.

The mesenteric glands are frequently scirrhus, enlarged, and hardened.

## The Kidneys, &amp;c.

The surrounding fat consumed, and little to be found except a cellulous membrane, easily inflated, so as to shew the cells that formerly contained the fat, which should surround the kidneys.

The substance of the kidneys sometimes lax, at others enlarged, scirrhus, and diseased. The tubuli and pelvis of the kidneys, in some instances, are evidently relaxed.

## Pelvis.

The fat in the pelvis is greatly decreased, as likewise by the sides of the spine, along which creep the large vessels and thoracic duct, &c.

In

## OBSERVATIONS.

Therefore all their parts must in some measure be morbid.

From this, serum, or water, will be sent into the stomach, &c. by the exhalents.

This must diminish *nutrition* by preventing the free passage of the *chyle*.

The urinary secretion, and consequently excretion, are greatly diminished. Dropical patients void little urine. The watery saline urinous particles, which should be daily evacuated, are kept in the constitution, and assist in adding to the increased bulk of the cellular membrane, or to the water diffused in cavities. It frequently happens in practice, that the most powerful diuretics fail in producing an increase of urinary discharge; and, if that secretion and excretion could be augmented; yet, from the appearance of the other viscera, it would go but a small way towards a cure, except in slight and recent cases. In inveterate cases *diuretics* seldom operate.

By the decrease of the adeps all the parts must have been less sustained; where adeps is in the cells, inflation is inadmissible, either in the fat surrounding the kidneys, or in different cavities about the pelvis between the parts, &c.

In



change in the universal dropfy, and the purposes for which they were designed cannot be perfectly and healthfully fulfilled.

In

#### DISSECTIONS, &c.

#### OBSERVATIONS.

In some cases, where in the fat has been greatly consumed, the parts were easily inflated by the use of a blowpipe, &c.

In the dropfy of the *ovarium* the swelling generally adheres to the peritoneum, intestines, &c. from prior inflammation and inosculation, but sometimes not. The uterus contains sometimes water, or hydatids.

In the dropfy of the ovarium of females, on which I have some new observations to make, the adhesion of the peritoneal covering of the tumor to the peritoneum leaves a chance of cure from operation, for the security of which I have, many years ago, invented a *canula* to enter the tumor in proportion as it recedes on the discharge of the fluid; which, it is hoped, will be found useful to surgeons, not only in tapping for the dropfy of the ovarium, but likewise in the ascites; dropsies of the ovarium are distinguishable from the ascites by the tumor being generally circumscribed, and the fluctuation of water is obscurer than in the ascites.

#### Muscles, &c.

All the muscles in universal dropsies appear palish, as though parboiled; they lose that *vivid red* which is the characteristic of a strong, muscular subject, and all their interstices contain a lax cellulous membrane, with a great diminution of the adeps, that should abound in the cellular membrane.

The marbled fat between the red flesh is therefore consumed.

The heart is a muscle; the arteries, stomach and intestines, bladder, &c. have muscular coats, as well as cellulous; these partake of the evils, and are affected by the absence or diminution of that gluten on which their strength and actions of contraction and dilatation depend.

The heart and arteries are excited to a quicker, though feebler action, probably from the overabundant serous saline particles, from the exciting stimulus being more pungent in such a degenerated state of blood, than when, as in health, it contains its due proportion of gluten.

From hence arise quicker contraction and dilatation; hence that low and sometimes quickened pulse common to confirmed dropsies, thirst, little heats and shiverings, &c.

#### Aborbent System.

Lymphatic vessels and mesenteric glands are

That the lymphatics, under this state of disease, convey serum, or aërial fluid, is

In this lax, watery state of the blood, the solids must lose part of their cretaceous, or earthy particles

## DISSECTIONS, &amp;c.

## OBSERVATIONS.

are found altered; the former only convey serum, or a humid air, instead of a restorative jelly-like fluid, and the latter are enlarged and scirrhus, by the coagulation of the fluid they previously contained, or contained at the death of the patient. It should be observed, that many of the appearances after death are the effects of the dropfical state of the fluids and dropsies; but afterwards these very effects of prior causes become super-added causes in the augmentation of the disease, and greatly add to the difficulty of cure, which experience often proves in the attempts to cure long-continued and confirmed dropsies: therefore, without visceral affections be removed, the cure of dropsies may seldom be expected.

The skin in the anasarcaous dropsey appears shining, the pores have been obstructed, which is confirmed by the dry, smooth skin.

Drop-

is proved by the facility with which the lymphatics of hydropic subjects after death are filled with quicksilver.—*Cadavers*, who died of other disorders, have the coagulable lymph so *coagulated* in the *lymphatics*, that it is difficult to demonstrate them; and here it ought to be observed, that I mean the lymphatics, which are a *distinct system* from the arteries and veins, which are sanguiferous: a system little known to the ingenious and learned *Boerhaave*, and many of his followers; but which has been since fully demonstrated by the joint labours of many excellent anatomists; among whom may be mentioned Dr. W. Hunter, Dr. Monro of Edinburgh, Mr. John Hunter, Meckell of Berlin, and Mr. Cruickshanks, Sheldon, Hewson, and Magnus Falconar, formerly my pupil.

The indurated *mesenteric glands* must certainly prevent the passing of the chyle to the receptaculum chyli, hence diminished nutrition. All the infants, and others who have died of an *atrophia*, or consumption of body, from want of nutrition, have their mesenteric glands commonly diseased, which my own numerous dissections have fully confirmed, as well as many others, who have examined morbid bodies after death, under similar circumstances.

All the ærial vapor, or fluid, that should be discharged by insensible perspiration, or by sweat, is retained in the body; it is deposited in the cells of the cellular adipose membrane to increase the dropfical bulk of the body, or is exhaled in

cles and gluten ; for the periosteum both internal and external, the bones likewise receive their daily nutriment

## DISSECTIONS, &amp;c.

## OBSERVATIONS.

Some ready believers, in many present and doubtful systems, *sub lite*, might expect to find in this treatise an application of some of the new chemical and pneumatical doctrines concerning *azote*, *oxygen*, *hydrogen*, *caloric*, &c. &c. Silence on these hypotheses is not observed from any want of industry in comprehending all that has been advanced by these new sectaries, which make some novices wild and the experienced and penetrating cautious ; but the certainty of all that is now so vehemently propagated, being liable to be overturned by future adventurers. Sound medical precepts are not to be relinquished on slight grounds, nor are human lives to be sported with on hazardous experiments.—Analyse chemically the human body, or any part, after death, do the productions from putrefactions, the fire, or many curious processes, prove that the same particles, chemi-

in cavities to add to the fluids already diffused there ; for the inhalents being relaxed, in conjunction with other parts, lose their attracting hydraulic powers, and instead of receiving the superfluous vapor, leave it in the cavity destined to drop-sical disease. It is necessary to remark, I do not admit, that the lymphatic system, strictly so called, are the only vessels that absorb superfluous moisture.—It is admitted they absorb and convey particles, that are gelatinous ; but what becomes of the saline watery particles, which no one acquainted with the exhalence of such particles can deny the existence of, where do they go ? By what means do they return ? If they did not return, all mankind would soon have dropsies : but they do return, *id est*, are carried back to the blood. Now, as in the *lymphatics*, neither saline particles nor serum are found, as they convey, in health, only *coagulable lymph*, and as *serum*, or water, constantly exhales in large cavities, as in the thorax and abdomen ; it follows, that the *superfluous vapor* must be conveyed by some other minute system which sponge up or attract these saline watery particles, and, as such particles are only found in sanguiferous veins, and never in lymphatics, unless diseased by dropsy ; it follows, that the minute sanguiferous veins open in the cellular structure, and in cavities, and absorb the serous saline watery superfluous particles to carry them back to the blood. Practical physicians, like myself, have little time for controversy ; but I intend giving, besides the above reasons, strong arguments to prove, that the *lymphatics*, strictly so, only absorb and convey superfluous glutinous particles, and that all superfluous



ment and supply of fresh particles from the gluten or albuminous deposits of the blood, as may be easily com-

## DISSECTIONS, &amp;c.

## OBSERVATIONS.

mistry, or modern pneumatics separate, pre-existed when the human body lived?—After the *analysis*, can the destroyed and separated particles of the human structure be restored to their original coherent and vital powers by *synthesis*? Can chyle, blood, serum, lymph, muscles, arteries, veins, lymphatics, nerves, bones, after analysis, be reproduced? How remote, then, must be the experiments on dead substances to the many conclusions hastily drawn on the living subject, without true logical inquiry, and without reflecting on the limited bounds of human comprehension and science? They are frequently the sportings of unbridled fancy, forming visionary conceits, and dashing from certainty, and what is proved and actually known to others, to the labyrinths of uncertainty, error, and falsehood. The first consideration of all philosophers, who wish neither to deceive themselves nor the rest of

aqueous saline and serous particles are conveyed to the blood by other means, than the ingenious and respectable anatomists, already mentioned, suppose. The ascertaining these facts, and settling the difference of opinions, however, on these subjects, may be more amusing, or speculative, than useful: for unless they lead to some practical utility in curing diseases, they are of little consequence. These hints, however, may lead to future inquiry, and cannot offend the candid.

The elements of the human body, according to the recent chemical analysis and writers, are as follows:

1. *Afotum* est primum corpus animalis elementum, ope etenim *acidi nitrosi* ex omnibus fere partibus animalibus elici potest, hoc enim majorem cum harum elementis affinitatem, quam *afotum* habet. Mucus, gelatina membranæ, tendines, ligamenta & cartilagine *minus* hujus elementi ope *acidi nitrosi* elargiuntur. *Plus* exhibet lymphæ, serum sanguinis, aqua *hydropicorum*, liquor amnii & caseus. *Maximam* vero *afoti* quantitatem dant lymphæ coagulabilis sanguinis & musculi. Caro juniorum animalium minus, adultorum plus, &c. &c.

- |                       |                           |
|-----------------------|---------------------------|
| 2. Materia caloris.   | 11. Potassa.              |
| 3. Materia lucis.     | 12. Elementum terreum.    |
| 4. Materia electrica. | 13. Elementum metallicum. |
| 5. Oxygenium.         | 14. Principium odororum.  |
| 6. Hydrogenium.       | 15. Liquidum nervum.      |
| 7. Carbonium.         |                           |
| 8. Sulphur.           |                           |
| 9. Phosphorus.        |                           |
| 10. Soda.             |                           |

16. *Principium vitale* omnibus partibus solidis & fluidis corporis *vivi elementum* sui generis inest, quod *vitam* illorum constituit,



comprehended from the supply of *callus* in large fractures, and even after the operation of the trepan, in which the bony substance suffers a loss. The bones in long confirmed dropsies totter, and scarcely support the huge, distended body; cartilages and ligaments suffer from the general relaxation, and muscular motion is avoided as much as possible: indolence, and a desire of rest, are amongst the lead-

## DISSECTIONS, &amp;c.

of mankind, should be, to ascertain whether what they desire be attainable or not, and if attainable, whether likely to prove useful: for as nothing can be more degrading than trifling, and useless pursuits, so nothing can be more laudable than the sensible direction of the mind to those objects, which, when acquired, force universal assent, and which are likely to stand the test of all future ages. *Pneumatics*, perhaps, when better understood, may become useful auxiliaries in the cure of some diseases, as well as electricity; but to abandon absolute facts, long established, for novel, hypothetical, and uncertain doctrines, would be losing the substance and catching at shadows.

## OBSERVATIONS.

tuit, hinc merito *vitale* appellatur. Hoc principium elementa cogit ad longe connubia ineunda, quam hæc juxta *vulgares affinitates chemicæ* leges inirent. Ope hujus principii *natura humores producit animales*, ut sanguinem, bilem, semen virile, & ceteros, quos *ars chemica nunquam producere valet*.

M. *Fourcroy* observes—"L'analyse des substances animales est la partie de la chimie la plus difficile & la moins avancée," &c. &c.

*Chaptal* says—"The chemist must search for his results rather in the *living body* itself, than in the operations of his *laboratory*, and can have no assistance from his *analysis*, but in ascertaining the nature of their component parts," &c. &c.

The *vital principle* is united to the body during the life of man, and various functions are performed; who then can, with true reasoning, affirm that what is discovered by *fire*, *acids*, *putrefaction*, &c. after death, was present and acted on the constitution during life? Hence the absurdity of hasty conclusions, on what even *Fourcroy* himself calls an *hypothesis* in which many particles, at present unknown, may hereafter be discovered, and thus new names may again be invented. I think the *synomina* are already exceeding all useful bounds.

ing features of universal cellular dropfy ; the firmest parts, therefore, give way to the watery inundation, in proportion to the magnitude of the disease.

#### ON ŒDEMATOUS SWELLED LEGS, DROPSIES, &c.

FROM what has been premised, it will be easy to define dropfy to be, *an overabundance of fluid deposited within the relaxed and enlarged cells of the cellular membrane, or in some cavity of the human body.* The *symptoms*, or signs of the former, are swellings, which pit on preffure ; of the latter non-inflammatory tumors, in which a fluctuation of fluid is discoverable by applying the flat of the hand on one side of the swelling, and striking the other side with the fingers, by which the undulation of a fluid will be perceived, particularly in the *ascites*, but more obscurely in the dropfy of the uterus, or ovarium. In *dropsies of cavities* surrounded with bones, the fluctuation of the fluid is not evident, as when water may be collected in the ventricles of the brain, pericardium, or even in the cavity of the thorax, or in cellulous, hydatid accumulations, &c. These species are discoverable by certain symptoms : in the thorax, by difficulty of breathing, not being able to lie down in bed without a sense of suffocation, a low and sometimes intermittent pulse, which particularly attends the *hydrops pericardii*, with pain, anxiety, restlessness ; but as many of these symptoms are attendants of other disorders, a skilful and experienced

perienced physician makes accurate inquiries of what preceded the complaints, and whether there be sufficient grounds to suppose a dropfy to be present, and if any of the remote causes formerly recited should be concluded adequate to the effects observed, and if superadded to the signs, there be *edematous swellings* of the legs; for this symptom leaves little doubt, in conjunction with others, of the patient's situation; except in some particular local dropfies, as of the ventricles of the brain, the dropfy of the ovarium, womb, or hydrocele, &c. these happen sometimes, without being preceded, or accompanied, by swellings of the legs. It is not here intended to give elaborate descriptions of all the varieties of dropfies; they are known by a glance of the eye to experienced and penetrating physicians; the inexperienced may consult the writings of different authors, who will frequently be found more profuse and redundant than useful. The actual intelligence of diseases can only be successfully acquired by long and accurate observation in medical practice. Attendance on the hospital sick, and keeping a methodical register of symptoms, diseases, and events, in a few years, if conducted with assiduity and a thirst for real science, will render a young artist more competent to a precise knowledge of morbid affections, than a hundred years study and reading, without observations from practice: this I have experimentally proved. After which, reading is useless; except for the discovery of the errors of those writers,

who



who were closet theorists without practice, or collectors and copiers of other men's sentiments, without sufficient judgment to separate the useful from the ambiguous, fallacious, and useless.

The swellings of the legs called *œdema*, which extend scarcely to the knee, are frequently the forerunners or companions of many other species of dropfy: these swellings should be considered as the alarm to an approaching disease; especially in persons advanced in life, or whose constitutions have been debilitated by any of the causes already related. If these swellings were early attended to, and cured on their first appearance in the ancles, dropfics, with all their train of fatal symptoms, would often be prevented.

The swellings of the legs that have a dropfical tendency are enlarged towards evening, and diminished in the morning; they pit, on pressure; the flesh under the skin appears lax, pale, and rather flaccid, and the impression made by the finger remains for a considerable time, as it would in dough, to which the puffy, dropfical body is not very dissimilar. There is, however, a great difference in different subjects, some cases being much slighter than others, according to the constitution, the stages of the disease, and the causes which gave origin to the swellings. It may likewise be remarked, that swellings of the legs are more common to females than to men; to the corpulent, than to the slender in body; to the lax, than to the robust; to the



the indolent, than those who use much bodily exercise.

ON THE IMMEDIATE CAUSES OF SWELLED LEGS,  
ŒDEMA, DROPSIES, &c.

THE immediate causes of the swellings are the mouths of the minute exhaling arteries pouring forth into the relaxed and enlarged cells a greater portion of fluid than the lax, venal system, or absorbents do inhale or absorb. Three conditions, then, are absolutely necessary to occasion the swelling.

I. The relaxation and less cohesion of the particles that compose the cellular structure; from whence the morbid distension and enlargement of the cells, or honeycomb, cavernose receptacles.

II. The effusion of fluid from the mouths of arteries which daily more and more distend and relax the cellular structure, and occasion the swellings, or tumefaction, to increase.

III. The retention of the fluid in the cellular or other cavity, from the absorbing powers of the inhalents or absorbents being partially or totally destroyed; hence the continuation of the swellings.

These *immediate causes* account not only for the edematous and anasarcaous swellings, but, likewise, for the dropical accumulations in the different cavities subject to dropsy; for the exhalents

pour

pour forth more than is necessary for humidity in the ventricles of the brain, cavity of the thorax, pericardium, or abdomen; what is superfluous is not sponged up and carried back to the constitution; therefore these parts become the seats of dropsy.\*

Out

\* *The subsequent experiments and facts will further illustrate the pathology of dropsies by a comparison of the living with the dead, and of those who die with other diseases, compared with those who die of dropical complaints.*

## IN THE LIVING SUBJECT.

### FACT I.

#### ON PERSONS WITHOUT CELLULAR DROPSY.

If a puncture or punctures be made through the cuticle and cutis into the cellular adipose structure of the leg, a little fluid, strongly tinged with blood, flows, which soon ceases, and the parts separated by the lancet or knife unite with facility, and perfectly heal by the first intention.

### FACT II.

#### ON PERSONS AFFLICTED WITH CELLULAR DROPSY, OR ANASARCOUS SWELLINGS.

If a puncture or punctures be made through the cuticle and cutis into the cellular structure under the skin, a fluid, at first mixed, or lightly tinged with blood, flows, and soon after a pale, pellucid, or colourless fluid, like *water*, issues, which continues to discharge for days, weeks, and, in some instances, many months; sometimes in great, at others in less quantities, according as the communication of the cells filled with hydropic fluids may be free and uninterrupted, or impeded; or as there may be more or less fluid to discharge.

FACT

Out of the three causes, two are evidently relaxation, or the want of due coherence of the par-

## FACT III.

ON THE CAVITIES OF LIVING SUBJECTS WHO HAVE NOT DROPSY OF CAVITIES.

If, by accident, a person should be wounded in the thorax or abdomen, in the scrotum or vaginal sheath of the testicles, little or no watery fluid flows.

## FACT IV.

ON THE CAVITIES OF LIVING PERSONS WHO HAVE DROPSIES OF CAVITIES.

If an incision be made in the *hydrothorax*, if the operation or the paracentesis, or tapping, be performed in the abdomen of persons labouring under an *ascites*, or if a puncture be made in the scrotum, when the cellulous coat is œdematous, or dropfical, or through the *tunica vaginalis testis* in the hydrocele, the fluid collected by dropsy flows in greater or less quantity, and of different degrees of consistence; serous or watery, and non-coagulable, or more glutinous and in part coagulable, similar to the coagulable lymph in the lymphatics.

The third experiment happens chiefly in armies, when soldiers are wounded; the fourth experiment is so well known in the practice of medicine, that no person can deny its veracity, except those who are ignorant of surgical operations, and have had little practical experience.

From these truths, which are consistent and well ascertained in the living subject, it is necessary to elucidate those facts by experiments of a similar nature on the deceased.

## FACTS FROM DISSECTIONS, &amp;c.

*In the dead Subject of those who had not Dropsy previous to Death.*

## FACT V.

ON THE CELLULAR STRUCTURE UNDER THE SKIN.

The cells, after death, are found more or less filled with adeps or fat, in a solid mass, liquifiable by heat, and the cells are not



particles composing the human structure: namely, the relaxation and præternatural enlargement of the

inflatable by means of a blow-pipe, nor do they distend from the use of that instrument, as they are already filled with their proper substance; but if they be partially filled with adeps, then they admit a small portion of air by means of the blow-pipe.

#### FACT VI.

ON THE CAVITIES OF THOSE WHO HAVE NOT DIED OF DROPSY, OR WHO HAD NO SPECIES OF DROPSY PREVIOUS TO DEATH.

Between the pericardium and heart is only found a sufficient quantity of fluid for facilitating the motions of this vital part; nor is there found any more fluid than is necessary in the thorax, abdomen, *tunica vaginalis* of the testicles, &c.

#### FACT VII.

ON THE DROPSICAL SUBJECTS, WHERE THE FLUID HAS NOT BEEN EVACUATED BEFORE DEATH.

In the anasarca, or cellulous dropsy, the cells are loaded with a ferous fluid, the cells are found greatly distended above their natural dimensions, and in the worst species of anasarca scarce any adeps is found in any part of the human body, but water fills the cells of the adipose membrane, instead of adeps.

#### FACT VIII.

ON THE CAVITIES OF PERSONS WHO DIED WITH DROPSY OF CAVITIES NOT EVACUATED BEFORE DEATH.

Serum, or serum and coagulable lymph, mixed in various proportions, are found within the pericardium, thorax, or abdomen, &c. according to the species of dropsy the afflicted laboured under previous to death.

In the watery brain, or *hydrocephalus internus* of the ventricles of the brain, in many which I have opened, I have found, in general, thin serum, unmixed with coagulable lymph.



the cells, and flaccidity in inhalents that should attract and convey the redundant serum to the returning venal system. The arteries always pulsate

### FACT IX.

ON SUBJECTS AFTER THE DROPSICAL FLUIDS HAD BEEN EVACUATED PREVIOUS TO DEATH.

The abdomen almost empty, but containing fluid in proportion to the length of time previous to death, in which the operation had been performed; for after tapping in either the *ascites* or dropsy of the ovarium, the cavities re-commence filling soon after the operation, in most instances.

### FACT X.

ON THE CELLULAR STRUCTURE OF PERSONS WHO HAVE DIED OF A CONFIRMED ANASARCA, WHERE THE PELLUCID SERUM HAS BEEN EVACUATED PREVIOUS TO DEATH.

The cellular structure is loose, spongy, and very flaccid, capable of being inflated by the blow-pipe to a very great degree, from the easy communication of the cells. I have tied a ligature very tight on the thigh, or below the knee, and, by blowing, have filled the cells to an enormous size, making an artificial emphysema, by which the part of the leg below the ligature has appeared much larger than when filled by the dropsical fluids.

Such facts have invariably been the result of numerous experiments and observations made by myself, or under my direction. These truths, conjointly with the anatomical facts and observations given in this treatise, it is presumed, will render the knowledge of dropsies clear and intelligible to every capacity. To those who have practically studied anatomy and physiology, and have been long in the habit of reasoning, joined with great and extensive practice, the anatomical and other truths here advanced, might have been greatly abridged, and yet the force of arguments, or inferences, would have been perfectly clear: but as those, who may require instruction, or information, or who may not have had those favourable opportunities for scientific study, might not have comprehended the propositions advanced, without the facts and reasonings annexed, it was thought expedient to be rather prolix than obscure, and these parts have been placed in notes, to reduce the size of the pamphlet as much as possible.

during life. At every pulsation, a fresh flow of blood is conveyed to every part, however distant from the heart and aorta, or however serous may be the state of the blood; consequently, the over-distended dropfical cavities are continually receiving a fresh supply : but the want of *venal attraction* and absorption is evidently the cause of the stagnation and accumulation in the morbid cells, or other cavities. It will appear clear, then, why the cure of dropsies should always be attempted by those remedies that strengthen the constitution, and restore the blood to its healthful and due consistence.

#### ON THE INDICATIONS OF CURE, ACCORDING TO AUTHORS, &c.

IN treating on the indications of cure for dropsies, and remedies administered, a minute detail will be avoided; for that might create a large volume, instead of a pamphlet; those who have patience and leisure, may consult many tedious, desultory writers on the subject, where they will find frequently much faith and credulous expectation from several inefficacious and, sometimes, ridiculous remedies; repetitions of the same sentiments for many centuries; a great number of copyists, and few original writers.\*

THE

\* The general indications for curing dropsies are two :

- I. To evacuate the water, or other offending fluid.
- II. To prevent a relapse.

The

## THE PROGNOSTIC IN VARIOUS DROPSIES.

THE prognostics, or a foresight of the probability of cure, or fatality of dropsy, can only be formed

The fluid is sometimes evacuated by chirurgical operations: this mode is not to be now considered, but the remedies that physicians prescribe for this purpose, which are—

1. Powerful cathartics of jalap and cremor tartar, scammony, gamboge, aloetics, elaterium, &c.
2. Diuretics of neutral saline preparations, colchicum, squills, cremor tartar, &c.
3. Sudorifics of antimony, camphor, and opium, &c.
4. Punctures.
5. Blisters, or issues.

## CATHARTICS.

In many cases, wherein the viscera are not deeply diseased, they prove beneficial, and greatly assist the cure; but if repeated frequently in debilitated habits, though they give temporary relief, yet, by destroying nutrition, they so weaken the patient, as to do more mischief than service. In the dropsy arising from the bleeding piles, or other intestinal hæmorrhage, they are contra-indicated, as their use would be attended with danger.

## DIURETICS.

*Diuretics* are always prescribed, but do not always operate; and if they did, they are quite inadequate to the cure of inveterate dropsy, in which the viscera are morbid. If they be of the saline kind, they must do mischief, by adding to the watery state of the blood an additional acrimony, especially if they should not promote the diuresis. The kidneys, in many dropical cases, cannot, from debility and relaxation, perform their office; and if they could, it would not remove the scirrhusity of the liver, nor give that firmness to the blood that effectually removes the watery diathesis.

The principal prescribed are neutral salts, as soluble tartar, sal diureticus, arcanum duplicatum, vegetable alkali, fossile alkali, nitre, spiritus nitri dulcis, oleum terebinthinæ, oleum juniperis, broom ashes, *digitalis*, which acrid poison, I am concerned to say,



formed from numerous observations determined by past experience; from considering the seat of the dis-

say, has been wantonly, in many hundreds of cases, prescribed to the destruction of many, and to the benefit of very few.

The prescribers forget that increasing urine, supposing it practicable, for which, neither the *digitalis*, nor any other diuretic are certain, which immense practice has determined, they forget that a discharge of water is but a trifling part of the cure, for punctures and tapping do this more effectually; yet how few survive one or the other.

*Diuretics* do not restore to the blood its lost gluten, nor to the relaxed solids, that firmness the cure of the disorder demands.

#### DIAPHORETICS and SUDORIFICS.

It appears very rational that *diaphoretics* and *sudorifics* might avail in dropsies, as their operation would determine through the skin the offending cause of the watery accumulation; but this opinion, like many others in medicine, is merely hypothetical, and contradicted by the touchstone of long experience. The most powerful sweating medicines will rarely act on the external surface, in which case their operation will be directed internally, and the vapor arising will augment the accumulated fluid of the already overloaded cavity or cellular structure. If they could act powerfully on the skin, and make the serum run through the pores, as through a sieve, yet the body would be *more relaxed*, and apter to receive a subsequent redundancy of fluid, and the principal object of cure, the *restoration of gluten and red particles*, would be defeated. Profuse sweats relax and weaken the habit, and is one of the forerunners of death in pulmonary consumption, and other diseases, which produce colliquative evacuations; therefore, sweating medicines, except in recent slight cases, and unless excited without the use of *diluents*, are more likely to do mischief than relieve, or assist in curing dropsies. If the sweating could be long continued without drink, and tonics and nutritious diet could be immediately applied, to give vigour to the relaxed habit, there might be some probability of use from this remedy.

#### PUNCTURES, SETONS, BLISTERS, and TAPPING,

Punctures in the anasarcaous dropsey will completely evacuate the cellular structure of the water, in many instances, so will a seton; blisters are not so certain. The whole cellular structure is sometimes



disorder; whether it be recent, or confirmed, whether accidental, as from hæmorrhage, fever, &c. or from morbid liver or other viscera; from the state of the patient's blood, and the magnitude of disease; from considering the mode of diet that has been long adopted; and, lastly, whether the afflicted be young or old.

times emptied, by the flow of many quarts of water by these means; for the cells of the cellular structure communicate, so that even the face, thorax and abdomen, thighs, &c. will be evacuated of the superabundant morbid fluid. It should, however, be observed, that if the patient has been deluded too long with expectations of a cure from cathartics and diuretics, sudorifics, &c. or any other less decided practice, and the disease has ravaged and increased, that *mortifications* often follow the applications of punctures, setons, or blisters; which though not always, yet generally end in death. Reflection, then, from past experience, and caution and foresight of the probable consequences of these remedies, should determine on their utility. The sooner they are used, the greater probability there will be of success: the like may be said of the dropsy of the lower belly, where tapping is recommended; but, in general, patients have such an aversion to early tapping, that their obstinacy and fears deprive them of the only chance of a cure, before all the viscera have been long immersed, or partly macerated in a warm, watery, saline fluid, that augments the disease and often renders it incurable.

#### TO PREVENT A RELAPSE.

Tonics and a dry regimen, and bandage, &c. are prescribed for this purpose: this is certainly a judicious practice; but if tonics were more, and diuretics, &c. less depended on, in the cure of dropsies in their early stages, numbers would be cured, who daily fall victims to this fatal disease. The disorder demands, besides the evacuation of the accumulated serum, the prevention of its return, the restoration of those red particles of blood, the absence of which occasions the pallid appearance in dropsies; as likewise the addition of that gluten, of which the blood and solids had been robbed, by the debilitating powers of the disease: how these ends are attainable, will be hereafter considered.

Past

Past experience proves the dropfy to be often a fatal difeafe, refifting all the common attempts to cure, efpecially if long confirmed.

#### SEAT OF THE DISORDER.

THE dropfy of the ventricles of the brain, after the appearance of the dilatation of the pupils, which is its diftinguifhing and decided characteristic, is generally incurable; as likewise, the dropfy of the pericardium and thorax, or chest: life may be long preferved by repeated tapping, in many inftances, of the *afcites*; but it generally terminates fatally. The hydrops of the female ovarium is commonly incurable; but I have cured fome inftances by the method that hereafter will be communicated.

If the difeafe be feated in the *tunica vaginalis testis*, the radical cure is frequently accomplished by chirurgieal operation; but whether the feton, &c. recommended by the late ingenious Mr. Pott, be fuperior to the methods propofed by the late Mr. Elfe, and other furgeons, I cannot prefume to determine. It is certain that both methods repeatedly fucceeded, and may be juftly confidered as chirurgieal improvements.

Local, œdematous fwellings, as of the eyelids, lips, *labia pudendi*, &c. are eafily curable in perfons who, in other refpects, are healthful; but in debilitated habits more difficult of cure.

The œdematous swellings of the genital parts, in the latter stages of anasarca, or other dropsies, are generally incurable; especially if they have a livid, red appearance: punctures, in these cases, produce sudden mortifications; but whether they be punctured or not, the patients generally die.

The swellings of the ancles and legs that extend only to the knee, called *œdema*, which are frequently antecedent to many other dropsies, are curable, if the methods of cure recommended in this treatise be applied in the early stage of the disorder; thus may thousands of lives be saved: but if the disorder may have been neglected, or trifling remedies administered; or if these swellings make their appearance subsequent to dropsies of the chest, pericardium, or ovarium, ascites, &c. of which they are only a symptom, then the *œdema* is incurable, on account of the frequent incurableness of its causes.

The *anasarca*, or universal dropsy, as it is sometimes nominated, of the adipose cellular membrane, swelling the whole body, is more frequently cured than the *ascites* or dropsy of the cavity of the lower belly; but this, in some debilitated habits, is incurable. If the viscera be deeply affected, and if the *anasarca* be accompanied with gout, asthma, or any other chronic disorder, the most judicious treatment may not prove successful, though a miserable life may be prolonged.



## WHETHER RECENT, OR CONFIRMED.

RECENT dropsies are certainly with greater facility cured than those which have been long confirmed; but some cases are so rapid, that, from the first moment they are perceived by an intelligent and experienced physician, they are pronounced incurable; particularly the *hydrocephalus*, *hydrops pericardii*, *thoracis*, and, in many instances, the *ascites*. It often happens that skilful and experienced physicians are not called into consultation, until the disorder be far beyond the reach of the most judicious medicine.

## WHETHER FROM ACCIDENTAL CAUSES, OR FROM MORBID VISCERA.

*SWELLINGS of the legs*, or dropsy, that succeed to fever, are easier cured than those which arise from hæmorrhages of the nose, or floodings, bloody fluxes, &c.; for repeated hæmorrhages must, in the end, prove fatal, unless restrained by the medical art, and relapse be prevented.

The dropsies arising from morbid viscera are most difficult of cure. If the stomach and intestines be only relaxed, the cure is frequently obtained by stomachic aperients and tonics; but if the liver, spleen, pancreas, and *hepatic system* of vessels, be affected deeply, the attempts to cure too often prove abortive.



## FROM THE PATIENT'S STATE OF BLOOD AND MAGNITUDE OF DISEASE.

THE state of the blood may be determined by the *face*, *lips*, &c.; for, in proportion to the palor, bloated swellings and debility, will the danger be greater or less, except in watery accumulations that attack the vital or animal functions; in some of these, no just conclusions can be drawn from the forementioned appearances: long experience and unprejudiced observation supply, in these cases, what no language nor books can communicate.

## FROM CONSIDERING THE MODE OF DIET THAT PRECEDED THE DISEASE.

WHEN patients have caused the disease by hard drinking, particularly of *spirituous liquors*, the cure is difficult, and if obtained, it is rarely permanent. The votaries to Bacchus can seldom be prevailed on to relinquish those Bacchanalian excesses to which they have been long accustomed.

Other classes of patients, though few in number, when compared to the former, are *water-drinkers*, or the admirers of *diluting drinks*, as they are called. If these be afflicted in the latter part of life with fever, hæmorrhage, or any other disorders that destroy the just crasis of the blood, and greatly relax the habit, an incurable dropy is not unfrequently the consequence. The same depraved

blood is introduced by a *vegetable diet*, or fruits, when injudiciously applied, to those who have been accustomed to a free generous food; these sink under the miserable water-gruel discipline, so much in vogue, amongst certain physicians, and if they add repeated bleedings and *saline purgatives*, death is the certain consequence. It is shocking to reflect on the numbers who have fallen victims to such professional prejudices of physicians, supposed learned.

#### WHETHER THE AFFLICTED BE YOUNG OR OLD.

THE cure of young persons is much easier obtained than the aged. *Swelled* legs in young females are curable, if arising from *chlorosis*; but as this subject is amply considered in the treatise on female diseases, it is here omitted. Dropsies happening to the old, to the gouty, asthmatic, and corpulent habits, are generally fatal, unless treated with great skill and circumspection.\* In many dreadful cases, of every species of dropsy, except the *hydrocephalus internus* and *hydrops pericardii*, life may be long preserved by judicious management, and it likewise may be abridged by ignorance, rashness, and empiricism.

\* In the treatise on the gout, with its alleviation by the *marine acid*, and *tepid water*, these circumstances are fully investigated, with many improved modes of treating, not *curing* the gout.

ON THE METHODS OF ATTEMPTING THE CURE OF  
DROPSIES.

IN the medical attempts to cure dropsies, many circumstances require consideration, which are—

I. The restoration and re-production of *gluten* in the blood and solid parts.

II. The regeneration of *red particles*, according to the different degrees of floridity, either in the *lips* or *face*, which the afflicted possessed prior to the disorder.

III. The removal of superabundant fluid and visceral disease.

IV. The invigoration of the habit and the prevention of a return of the disorder in those who have been supposed cured.

In the chirurgical attempts to remove dropsy may be considered—

Punctures,

Setons,

Iffues,

Scarification and cupping,

Blisters,

Caustics,

Tapping, and

The operations for the hydrocele, &c.

Though the loss of *gluten* and *red particles* in the blood be the primary causes of dropsies, in general, yet morbid viscera frequently being the effect, these latter shall be first considered; for unless

less diseases of the stomach, liver, mesenteric glands, spleen, &c. be removed, neither gluten, nor red particles of blood will be re-produced.

The *debilitated stomach* and intestines are remediable by stomachics, bitters, and tonics.

#### FORMULÆ OF PRESCRIPTIONS.

IT is not intended to limit practitioners to any of the forms introduced; for as all cases differ in some particulars, so should remedies; these exhibited with rational variations, are what have been used with great success in the St. Mary-le-bone Infirmary, and in private practice, for a period of nearly forty years.

To be attached to any particular prescription or medicine, shows a paucity of intellects by no means honourable to the profession; the degrees of potency that remedies possess should be well ascertained, the probable resistance of disease, and the strength of the patient: he who best comprehends these circumstances, will be best able to select and apply what is most proper on every occasion; this knowledge, however, can only be acquired by those true sources of intelligence, long and immense experience, and unprejudiced observation. Experience, however, may give rules, but their appropriate application in practice must ever depend on the learning and discrimination of the prescriber.



## DRAUGHTS.

## No. I.

℞. Vin. chalybeat.

Tinct. amar aa ʒij.

Aq. pur. ʒiſs.

F. haustus bis vel ter de die fumendus.

## No. II.

℞. Tinct. flor. martial. ʒj.

——— Columb. ʒiij.

Infus. gentian. comp. ʒjſs.

F. haustus, mane, meridie, et hora vij pomeridiana, quotidie, cum mendus.

## DROPS.

## No. III.

℞ Tinct. flor. martial. ʒjſs.

——— cort. peruv. ʒijſs. M.

Cujus fumat ʒij vel ʒiij bis vel ter de die in coch. iij, infus. flor. camæmil. cum pauxillo pulveris zingiberis.

## No. IV.

℞. Sp. fal. volat. aromat. ʒiſs.

Tinct. cort. peruv. ʒijſs. M.

Cujus fumat ʒij vel ʒiij in pauxillo aquæ bis vel ter de die.

## MIXTURES.

## No. V.

℞. Liquor. anodyn. Hoffman. ʒiij.

Decoct. cort. peruv. ʒvij.

Tinct. ejusdem ʒvj. M.

F. mistura cujus capiat coch. iij ter vel quater de die.

## No. VI.

℞. Extract. flor. chamæmil. ʒij solve in aq. pur. ʒviij.  
Vin. chalybeat.

Tinct. cardamom. aa ʒvj. M.

F. mistura de qua capiat coch. iij ter vel quater de die.

## ELECTUARY.

## No. VII.

℞. Pulv. rad columb.

— — gingib. aa ʒij.

Rubig. ferri ʒj.

Conf. cort. aurant. ʒjss.

Syr. simp. q. s. f. electuarium, cujus sumat Q. N. M. bis vel ter de die.

All diluting drinks should be avoided, and the *driest* but most nutritious diet should be strictly observed.\*

The *hepatic*, scirrhus, or biliary obstruction, morbid mesenteric glands, spleen, &c. should, if possible, be removed by hydrargyrus, in small doses, given as an alterative, or by alteratives of the hydrargyric preparations and antimonial sulphurs, combined with saponaceous remedies, and in many cases with aloetics, rheum, &c.

It is well known that scirrhus liver hath been cured in hot climates by salivation, and where dropsy has arisen after jaundice or diseased liver, an accidental salivation from the administration of hydrargyrus, with *squils* and *sapo*, has effectually cured the disorder. Whoever expects to cure dropsy, if the liver, or mesenteric glands, &c. be

\* See Treatise on Diet, Vol. IV. of the Rational Practice of Physic.

much affected, without *hydrargyrus*, will be disappointed. The mineral alteratives should be given so as not to salivate, in the manner I have recommended in the book of nervous and female diseases, where there are numerous prescriptions, and reasonings for their exhibition.

## No. VIII.

℞. Pil. ex hydrarg. ʒss. (vel Plenckii)

— e scilla ʒijss.

M. f. pilulæ xl. quarum sumat j vel ij mane ac nocte.

## No. IX.

℞. Argent. viv. ʒj.

Tereb. Venet. ʒiss.

Contere benè, deinde adde Sulph. aurat. antimon. ʒij.

F. pilulæ lx. quarum sumat j vel ij mane et nocte.

## No. X.

℞. Pulv. antimonial. ʒj.

Calomel. gr. x.

Pulv. scillæ ʒss.

M. accurate, deinde adde conf. rosar. vel cynosbat. q. s. f. pilulæ xxx. quarum sumat j mane et nocte, vel ij omni nocte.

## No. XI.

℞. Calomel. pp̄.

Sulph. aurat. ant. vel kermes min. aa ʒj.

Contere in mortario vitreo saltem per xij horas.

℞. Hujus pulveris ʒjss.

Pil. e scilla ʒijss.

M. f. pilulæ xl. quarum sumat j vel ij mane et nocte.

## No. XII.

℞. Merc. emet. flav. (turpeth. min.) ʒj.

Sulph. aurat. ant. vel kerm. min. ʒiij.

Contere benè per xij horas, saltem, f. pulvis.

## No. XIII.

℞. Hujus pulveris ʒss.

Pil. e scilla ʒijss.

M. f. pilulæ xxx. quarum sumat j mane et nocte.

The mercurials without the antimonial sulphurs are apt to affect the mouth; but, combined in the foregoing mode, they strictly act as alteratives: but much depends on their accurate preparation. If narcotics may be necessary, though they are certainly contrary to any intentions of cure, they may be added; but it should be recollected, that opiates in dropsies accompanied with difficult breathing, should be either avoided, or given with great caution, as they sometimes have proved fatal.

The rational restoration of red particles is to be attempted by chalybeates; in the red particles is found *ferrum*; but ferruginous particles are destroyed, when cruor or red parts are absent. Preparations of zinc, and vitriolics, alternately with the alteratives, are efficacious in dropsies. The alteratives are to be prescribed night and morning, and the invigorators of the habit and tonics may be repeated in the course of the day.

The formulæ of prescriptions of the chalybeate and tonic kind may be seen from prescription the first to the



the eighth. The formulæ of prescriptions beginning with No. XIV. are more powerful, except the first, which is the best tonic in cases where the most efficacious would produce a dyspnœa, or difficulty of breathing; especially if a cough be present: therefore, it will be most judicious to begin with this, and gradually introduce those which are stronger bracers, as the stomach may be enabled to bear them. While those powerful tonics are given, the alteratives may be administered night and morning, or at night only, as the prescriber may think most eligible. It is by these means, that numerous dropical cases have been cured, when the disorder has not been too much advanced, and when the natural and vital functions have had sufficient power to co-operate with judicious medicine, without which conditions, no cure by these, nor any other means, can be rationally expected in inveterate dropsies.

## No. XIV.

℞. Infus. gentian. c. (amar.) ℥vij.

Ferri vitriolat. (olim sal martis) gr. xvj.

Kali præparat. (olim sal tartari) ʒ℥. Solve,

Dein adde Tinct. cort. peruv. vel amar. ʒj.

M. f. mistura de qua sumat coch. iij meridie et hora vj pomeridiana quotidie, vel ter de die.

## No. XV.

℞. Zinci vitriolat. (vitriol. alb.) gr. j.

Solve in Decoct. cort. peruv. ℥vij.

Tinct. ejusdem ʒj.

M. f. mistura cujus sumat coch. iij bis vel ter de die.

## No. XVI.

℞. Flor. zinci gr. ij.  
 Solve in Aq. rosar. ℥vij.  
 Tinct. columb. ℥j.  
 F. mistura cujus capiat coch. jii bis vel ter de die.

## No. XVII.

℞. Cupri vitriolat. (vitriol. cœrul.) gr. j.  
 Solve in Aq. rosar. ℥j.

℞. Hujus solutionis ℥j.  
 Aq. menth. pip. ℥jss.  
 Tinct. cascarillæ ℥iij.  
 F. haustus bis vel ter de die sumendus.

The *gluten* of the blood can only be restored by the debility of the stomach, and obstruction and laxity of the lacteal system being removed; so that a salutary absorption of chyle, united with gluten and oleaginous particles, may be received, and conveyed to all parts requiring gluten and oil for their nutriment; as the solids and cells of the cellular structure. This article, therefore, includes nutritious, animal diet; for, without the junction of judicious nourishing food to the other means, medicine must fail of curing œdematous swellings of the legs and dropsies, or of restoring health to the debilitated constitution.

The removal of the superabundant fluid is attempted by cathartics and diuretics; and these may be administered usefully in many slight, and in all recent cases; but if cathartics be frequently

repeated in confirmed dropsies, and especially if salts be prescribed; by destroying the tone of the stomach and intestines, by relaxing the habit, and preventing salutary nutrition requisite for the cure, they frequently do more mischief than service, and render a disorder, that would have been promptly cured by tonics, incurable. As to *diuretics*, exclusive of their uncertainty of action in the treatment of dropsies, their effects, if attainable, cannot restore lost energy to the solids, nor add glutinous, nutritious, and red particles, to the fluids. Squills united to mercury are the most efficacious preparations; but, in this junction, it is most probable, that the latter produces the good effects attributed to the former, not as a diuretic, but by removing visceral, hepatic, or mesenteric obstruction, and thus preparing the lacteal system for the reception of an healthier chyle, better prepared by the return of a more consistent bile to the *duodenum*.

#### HYDRAGOGUE CATHARTICS, OR PURGES FOR DROPSIES.

##### No. XVIII.

℞. Infus. fen. ʒiſs.

Tinct. sac. ʒſs.

Pulv. crem. tart. ʒjſs.

℥. haustus tertio vel quarto quoque mane sumendus.



## No. XIX.

Rx. Calomel. pp<sup>t</sup>. gr. vj.

Pil. ex colocynth. cum aloe ʒʒ.

Pulv. gambog. gr. x.

M. f. pilulæ viij, quarum sumat j quavis hora donec alvus copiose respondeat, superbibendo coch. ij misturæ sequentis.

Rx. Infus. sen. ʒv.

Tinct. ejusdem ʒj.

M. f. mistura.

## No. XX.

Rx. Pulv. crem. tart. ʒijʒ.

— zingib ʒij.

— jalap. ʒijʒ.

Syr. simp. q. s. f. elect. cujus sumat Q. N. jugland. omni hora donec alvus copiose respondeat, superbibendo coch. ij misturæ sequentis.

Rx. Infus. sen. ʒvij.

Tinct. sac. ʒj.

F. mistura.

## No. XXI.

Rx. Pulv. cremor. tartar. ʒijʒ.

Spec. aromat. ʒj.

Pulv. jalap. ʒjʒ.

M. f. pulvis dividendus in vj partes quarum sumat j omni hora in pauxillo mellis donec alvus benè respondeat, superbibendo haustum sequentem.

Rx. Tinct. sen. ʒij.

Infus. ejusdem ʒvj.

F. haustus.

In slight cases, where a light purgative is only necessary, or permissible, a dram or two of magnesia,



sia, with a little powdered zinger, may be taken in any convenient vehicle, drinking, immediately after, a glass of lemonade.

These remedies act mildly as a purge, and frequently as a powerful diuretic, from the neutralisation of the acid and magnesia in the stomach, forming a dissolved, neutral, aperient salt.

Other purges, according to the will or judgment of the prescriber, may be formed; but Glauber or *Rochelle* salts, and similar purgatives, are improper; though some physicians, who are much prejudiced in favour of saline cathartics, recommend such laxatives in almost every disease. As it is impossible to accurately foresee how a purgative may operate, it was thought most judicious to order repeated doses, until the purposes intended be fulfilled, by the evacuation of water, than to prescribe a violent dose, at the hazard of doing mischief.

To prevent the return of the disorder in those who are supposed to be cured, rigidly demands the driest and most nutritious diet that can be procured. As over humidity is dropsy, so is ficcidity its cure. If the cells of the cellular structure, or cavity containing the superabundant fluid, be not collapsed and kept contracted, by every rational means, and rendered impervious, as much as possible, to future accumulation, the cure of dropsy cannot be permanent; for the lax disposition of the cells and cavities, even after the evacuation of the fluids has been accomplished, easily admits a fresh supply; this

this fact every experienced practitioner must have observed in reiterated dropfical relapse.

## ON THE CHIRURGICAL METHODS OF EVACUATING THE SUPERABUNDANT DROPSICAL FLUIDS.

### PUNCTURES.

IN the œdema, or swelled legs, the sooner the water is evacuated the greater will be the success, as, likewise, in the anasarca. A simple puncture or two will frequently evacuate a great quantity of fluid; but it will always be advisable to puncture the legs as near below the knee as possible, or on the upper part of the swelling; in the thighs of the anasarcaous the operations will be securest.—Long experience confirms the danger of gangrene from punctures, if performed in long-confirmed dropfies towards the feet.

### SETONS.

I have many years recommended *setons* in almost every species of dropfy, except the *hydrocephalus*, and some others which are merely local, and with extraordinary success. The needle should not be larger than the greatest used for amputation to take up the vessels, and it should be strait. The part for performing the operation should be about an inch and half, or two inches, below the knee, externally, on part of the soleus and gastrocnemius muscles.

OPERA-

## OPERATION.

The tumefied, cellular membrane, should be gently drawn up, by the finger and thumb of an assistant, and, at some little distance, by the finger and thumb of the left hand of the operator; thus the cellular membrane is raised from the muscles that lie under. The needle should then be passed about four inches below the knee, on the outer and upper part of the *gastrocnemius* muscle, not quite transversely, to favour the discharge; the silk left in the wound, with a sufficient length to move it daily, and cut off that which has been in twenty-four hours.\*

A number of anasaruous, and other dropsies of a fatal tendency, have been cured by this means, in conjunction with tonics, mineral alteratives, and dry diet. Many gallons of serum are frequently discharged, and there have been some instances in which the chest, and even the abdomen, have been liberated from the superabundant fluids, and a cure has been the consequence. If this remedy be applied too late, a gangrene succeeds; but in some cases, even where that has happened, the patient has been greatly relieved for months, and life has been prolonged, the difficulty of breathing, and other oppressing symptoms, have been alleviated, though, in time, death has closed the scene.

\* The seton may be applied, in a similar manner, on the thigh; but it would be hazardous to apply a seton low in the leg, or towards the foot, or even to puncture those inferior parts, for a gangrene may follow.



## ISSUES

Are less efficacious, but similar to setons, cupping, and scarifications.

If the constitution be not greatly reduced by the disorder, and if there be no reason to expect a mortification will follow cupping and scarifying, they may be performed safely; but it should be recollected, that as many punctures are more dangerous than one or two, there would be more to apprehend, and less to expect, from the scarificator, than from the simple puncture of the lancet.

*Gentle bandage* is generally necessary, to prevent the too great and sudden evacuation of the fluid, to support the relaxed muscles, &c. in debility, and, by gentle pressure of the cellular texture, to render the cells less pervious to the future accumulation of fluid.

## BLISTERS.

*Blisters* are frequently used in practice, but exceptionable, from the extensiveness of their operation, and from the gangrene that follows, if applied in a reduced habit, where the blood and fluids are greatly depraved, or tending to a putrid state. They should be seldom placed lower than the thighs; but, in cases of dropsy of the chest, they should always be applied to the *scrobiculus cordis*, or side, and kept continually discharging, until the difficulty of breathing be removed, if removeable. Blisters, however, acting only on the surface, are not so important, nor safe, as *punctures*, or *setons*, which



which actually penetrate the cells of the cellular membrane, and by the cellular communication of the whole body, often empty all the morbid fluid.

### CAUSTICS.

Caustics are hazardous in universal dropsy, and, therefore, should be used with caution. In the *hydrocele*, they have proved successful; but I am of opinion, they are so uncertain in their operation, that they should be applied with great circumspection; for who can, with certainty, determine to what depth a caustic may destroy the parts?

### TAPPING

Is performed with a trocar passing through a canula, to which instrument I have invented an improvement, particularly useful in drawing off the water, or fluid, contained in any sack, as in the *ovarium*, &c. an explanation of which is given in this treatise, by a copper-plate print.

The evacuation of the fluid by this operation rarely produces a permanent cure; but this is frequently owing to two causes; namely, the obstinacy of patients, in not admitting the *paracentesis* to be performed early enough to prove beneficial; or to the non-observance of dry, nutritious diet, joined with bark, acid of vitriol, and other tonics, after the evacuation of the fluid. It must be remarked, that tapping is performed repeatedly, and several lives have been preserved many years, by

this operation, which is not painful to the patient, nor difficult to the surgeon.

The evacuation of the fluid in the *hydrocele*, by the small puncture, I have known performed many years, occasionally, on different subjects, without danger, and with little inconvenience, and sometimes it has proved a *radical cure*.—The operation recommended, therefore, for the hydrocele, should not be rashly undertaken, for it has sometimes proved fatal to my own knowledge; but whether the operation should, or should not be performed, ought to be submitted to the opinion of skilful surgeons, whose probity can be depended on, and who have had sufficient experience in hospital practice to adopt or forbid the operation, according to cases, constitutions, and circumstances.

#### WATERY HEAD, OR HYDROCEPHALUS INTERNUS,

IS, in general, incurable; but two cases, out of many, have been cured at the St. Mary-le-bone Infirmary, by perpetual blisters on the head, occasional purgatives, with calomel and tonics.

#### DROPSY OF THE CHEST, OR HYDROPS PECTORIS,

IS commonly incurable, though in very few instances, out of immense numbers, a cure has been performed by the seton in the legs, and by antimonials, joined with tonics and mercurials; but the difficulty of breathing accompanying this disorder

order forbids the use of tonics, though in rare instances they may be beneficial, but great caution is necessary in their exhibition. Life has been a considerable time protracted by art; but even when favourable symptoms appear, sudden and unexpected death has terminated the fate of the unhappy patient.

As to the evacuation of the fluid by operation, the success is very uncertain; but skilful hospital surgeons should be consulted in these dangerous cases; for in desperate diseases a doubtful remedy may, in some instances, be applied.

#### HYDROPS PERICARDII, OR DROPSY OF THE PERICARDIUM SURROUNDING THE HEART,

IS always incurable; it even admits of little or no relief. A physician can only be a commiserating spectator of the disorder. Neither *cathartics*, *diuretics*, *sudorifics*, *blisters*, *setons*, nor *tonics*, avail. The only benefit that can be derived from medicine is, to alleviate the symptoms by perspiration, if practicable; to determine the fluids, as much as possible, to the surface of the skin, and to evacuate by drastic cathartics, as far as the patient can suffer the debilitating remedy, and by extreme *dry diet*, a temporary alleviation of the symptoms is procured, and a miserable life protracted, in a disease, that, sooner or later, most generally proves fatal.

Dropsical affections of the mediastinum, or lungs, are almost irremediable, and the patient can scarcely  
lie



lie horizontally, without dread of suffocation; these dropsies are not so painful as the dropsy of the pericardium surrounding the heart. Pungent pain under the *sternum* distinguishes the former; difficulty of breathing and *intermittent pulse*, the latter; but, in many cases, it is impossible to ascertain the species of disease, which, however, is of no great consequence, as they are all generally destructive.

THE ASCITES, OR DROPSY IN THE ABDOMEN, OR CAVITY OF THE LOWER BELLY,

IN some instances, has been cured by *tonics* of the *vitriolic* kind, without tapping, interposing *violent* cathartics every two or three days, and by observing an extreme *dry* regimen. The same plan has diminished the disorder, in many instances, at the St. Mary-le-bone Infirmary, and in private practice; when the patients may have obstinately refused to submit to tapping, and even where that operation has been performed, the re-accumulation of fluid has been, for a considerable time, suspended. In some rare instances, I have seen patients perfectly cured, after repeated tapplings, by the tonic and alterative plan, and a strict *dry regimen*; but by far the greatest number, though their lives may be prolonged by the *paracentesis*, &c. yet the disease, at last, proves fatal. It should be observed, that those who have been positively cured have been young, or middle-aged and sober subjects; the dis-



disorder has arisen from some accident; as from hæmorrhage, fever, peripneumony, or pleurisy; in which cases, profuse bleedings had been necessary, to preserve life: but if the *liver*, or other viscera, be previously diseased, or if the *ascites* should have followed a jaundice, the art of medicine, however skilfully applied, seldom affords a permanent, though it may a temporary cure. It may, likewise, from experience, be remarked, that in some instances, where the cure has been thought confirmed for two or three years, the disease has re-appeared, and has soon proved fatal; but while the patient appeared well, no small degree of reputation has been acquired by the physician. Many published cases of *surprising cures* in dropsies have been of this description; by which, inexperience, for a time, has been deluded, and the art disgraced by too vain a confidence in supposed cures, which time proved not permanent. Caution, therefore, becomes necessary, amongst men who regard their own honour and the reputation of the medical art, before they assert that dropsies are cured, when they are only relieved; and though it may be humane to comfort the afflicted with hope, yet to conceal the truth from prudent friends is dishonourable.

#### ENCISTED DROPSY OF THE PERITONÆUM, OMENTUM, MESENTERY, &c.

THESE dropsies are not so common as the *ascites*; they are distinguishable from the *ascites*, by

not having so evident a fluctuation; these abdominal tumors are often uneven, irregular, and divided, sometimes above, in other instances below the *umbilicus*, or navel; soft, hard, solid, fixed, or loose, according as the fluid may be serous, viscid, or scætomous, adhering to the surface of the intestines or not; as the sacks may be large or small, few or many, and as the fluids contained may communicate or not with one another. All these facts have appeared on dissection, in numerous instances.—The mode I have taken to ascertain whether the swellings communicate, has been, by pressing hard on one tumor, and directing the fluid to some other swelling, and observing if the diminution of the swelling pressed augment the size of the other; but it must be confessed, that after the closest observation, there is always more of conjecture in these cases than of absolute certainty. A skilful anatomist, however, as in all other dubious cases, will be best qualified to ascertain whatever is ambiguous; and those who are not deeply skilled in this science should consult those who are, for by such candour, many errors would be avoided which are daily committed.

The attempts to cure such cases are very uncertain. If the *paracentesis* be performed, which is *bold* practice, one tumor will be only evacuated; and as that recedes, the canula of the common trocar, not being sufficiently long to keep its position, if even the tumors communicate, pressure will only pour forth the fluid into the abdomen, and if this fluid  
be

be partly purulent pus, which is not uncommon, death will soon be the consequence. If the *tumor* adhere to the *peritonæum*, the chance of evacuating the accumulated fluid is more probable; but in that case, if the tumor should recede much, unless it be followed by the new-invented instrument, to obviate the disappointments which have often been experienced, the operation will be fruitless. After emptying the tumor, or tumors, they frequently refill; so that the only advantage gained is to obtain a temporary respite, by removing the pressure of the swelling from the intestines, large vessels, or even the diaphragm; for sometimes the tumors ascend, and impede the action of this respiratory muscle. The fatality of these species of dropsies, earlier or later, must be obvious to every reasoning anatomist, physiologist, and experienced physician.

#### ON THE HYDROPS OVARII, OR DROPSY OF THE OVARIIUM, &c.

THE dropsy of the *ovarium* has been very imperfectly understood, and can only be ascertained by a consideration of the situation and circumscription of the tumor when not far advanced, and by anatomical reflection.

#### S Y M P T O M S.

A tumor is first observed on one side or other of the abdomen, immediately above the pubis laterally,



rally, below the navel, and sometimes, though rarely, on both sides, if both ovaria be affected. If the case be dropfy of the uterus, the swelling is in the direction of the *symphysis pubis*, neither inclining to one side nor the other. In the early period of the disease, the tumor seems rather loose, and soft; but as it advances in magnitude, its peritoneal coat commonly adheres to the peritonæum, probably from inflammation, or its effects.\* The tumor largely increasing, has the appearance of a gravid uterus, only that the swelling is more on one side than the other; and it has been frequently mistaken, even by men esteemed very skilful in the obstetric art, for pregnancy.† The tumor gradually advancing in size, approaches the *scrobiculus cordis*, in many instances; but in some, the progress of the dropfy of the ovarium is very slow. When it be large, a fluctuation is perceived, which is obscurer than in the true ascites, owing to the thickness of the coat of the tumor containing the fluid, which, for the most part, adheres, more or less, to the peritonæum, sometimes to the shrivelled omen-

\* The adhesion of the enlarged ovarium, sometimes containing gallons, which naturally is no larger than a small *walnut*, is supposed to arise from inflammation, through the friction of the peritonæum against the swelled ovarium, in inspiration and expiration; the fine membranes become abraded, and the excoriated parts inofculate; the same happens to the surface of the intestines by the destruction of the omentum, and by the peristaltic action of the intestines, &c.

† In my long experience I have known some melancholy instances of this nature by too precipitate a determination. It is hoped, however, the practical observations here communicated will prevent future error, so disgraceful to our humane art.



tum, mesentery, and surface of the intestines, and by its compression on the intestinal tube, the descent of the feces, and their evacuation, have been totally prevented, nutrition has been impeded, the urinous secretion extremely diminished, and the menstrual evacuation, in some instances, has been totally suppressed. It is, however, distinguishable from pregnancy, by an examination of the *breasts*, which in dropsies are flaccid, in pregnancy generally turgid: the obscure fluctuation of the fluid is another token, but not always certain, for the fluid is sometimes so viscid, and the sack is so thick, that little or no undulation can be perceived. If the swelling should have proceeded beyond the usual period of pregnancy, be more on one side than the other, and continue advancing in size, for above one, two, or three years, there can be little doubt of the disorder. If the swelling be early examined, it is so distinct either on one side of the lower part of the abdomen, or the other, as to be easily discovered by skilful physicians. The mode, however, I have always practised, in cases where the disorder has been doubtful, has been to carefully examine the state of the *os uteri*. Whoever well understands the art of midwifery, and the state and changes of the *os tincæ*, when the uterus be pregnant, or unimpregnated, cannot be deceived.\* It will

\* If in any cases a physician should understand the theory and practice of midwifery, which all who are consulted in female diseases should, it is particularly in this and other uterine complaints. There are many excellent operating men-midwives who

will be the most certain means of ascertaining the fact; the neglect of which has led to fatal consequences, by performing the *paracentesis* on pregnant women; or by long mistaking the case of ovarial dropfy for pregnancy, the best period for curing the complaint has elapsed, before efficacious remedies have been administered.\*

### PROGNOSTIC AND ATTEMPTS TO CURE.

In the early stages of the disorder, when the swelling in the belly be not large, the general methods of cure already recommended should be applied, according to cases, constitutions, and other circumstances. Evacuations and tonics have cured some recent cases; but the art of medicine is seldom consulted, until it be too late to cure the disorder without operation; in which case, the sooner it can be performed, as hath been observed in the ascites, the greater will be the probability of success.

In addition to the common trocar, I invented an instrument to pass through the canula of the trocar, that, as the tumor recedes, this silver tube may follow, by pressure, through the aperture, un-

know little of practical medicine, and there are many practical physicians who know much less than they ought of the obstetric art: a *complete physician*, however, should study and comprehend all the branches, or practise with great caution, in doubtful diseases. The branches of physic are all so connected, that they cannot be separated without injury to the whole.

\* Many relations of dropsies of the *womb*, as nominated by authors, have been dropsies of the *ovarium*. Unskilful, or inaccurate dissections, are frequently the cause of mistakes of this nature, which profound anatomical science can alone prevent.

til all the fluid be evacuated. In incysted dropsies of the abdomen, and even in the ascites, this instrument may be useful.

In the *hydrops ovarii* very viscid, ropy *pus*, from suppurations, is not unfrequently discharged; therefore a *large trocar* is proper for the operation, lest the curative intention of evacuating the fluid be defeated, which circumstance I have seen happen, not only in the dropsy of the ovarium, but even in the ascites.

Another motive for using the tube is the non-adhesion of the tumor to the peritonæum, which has been clearly proved to have existed by dissection. The canula of the common trocar not being sufficiently long to keep its position in the tumor, after a small part of the fluid is drawn off; the remainder of the fluid flows into the lower part of the abdomen, or pelvis, and if it be *pus*, soon puts a period to the patient's existence, by its putrefactive tendency.

This disorder sometimes happens to young females, and has been too often pronounced pregnancy; an unfortunate instance of which came into the St. Mary-le-bone Infirmary, lately. Mr. Phillips, surgeon to the household of his Royal Highness the Prince of Wales, our surgeon, skillfully operated on this young woman twice, first on the right, and secondly on the left side, and found the tube I invented very useful in evacuating a considerable quantity of very thick, ropy *pus* and *serum*; but the patient languished, refused a third  
ope-



operation, and died. The appearances of this case after death will demonstrate that human art could not have saved the patient's life; but in the early stage of the disorder, had the tumor been ascertained, there is great reason to conclude, that a cure might have been effected; for the success attending other cases justifies the assertion.\*

In

### \* CASE I.

Ann Briffenden, aged 24, consulted one of the most eminent practitioners in London, for a tumor, which appeared in the abdomen, which was pronounced, without hesitation, *pregnancy*. The young woman, conscious of her innocence, persisted in its impossibility, but she gained little credit. The suspicion of her friends and relations, who, depending on the skill and authority of the learned *accoucheur*, would not be persuaded to the contrary, and would scarcely hear her most serious protestations in defence of the virtue of her character, and the anxiety she suffered produced feverish symptoms and serious indisposition. Mr. *De Bruyn*, a very ingenious surgeon and man-midwife, in North Audley Street, was consulted; who, doubting the case, requested my opinion. On examining the breasts, they appeared *flaccid*; the tumor in the abdomen was large, extending nearly to the *scrobiculus cordis*, and had the appearance of an impregnated uterus, if other circumstances had corresponded; for the menstrual evacuation had been suppressed. With much difficulty the patient was persuaded to undergo an *obstetric* examination, and the first circumstance, exclusive of the *flaccidity* of the breasts, was, that the hymen was not ruptured, and with some difficulty the *os uteri* was examined, which, however, was *shorter* than is usual in virgins: but, after this accurate examination, it was determined, by myself and Mr. *De Bruyn*, that the case was not pregnancy, and I pronounced it a *dropsy* of the *ovarium*, and this opinion was soon confirmed by facts.

This patient was admitted, in March 1795, into the St. Mary-le-bone Infirmary; a few medicines were prescribed; but as all the symptoms seemed to arise from the pressure and magnitude of the tumor, with much difficulty the patient was prevailed on to submit to the operation of tapping. In the month of May, the operation was performed, on the right side, by Mr. Phillips, and the new-invented tube was used, by which means a great quantity of coagulable lymph, mixed with serum,

was



In other instances, by tonics, dry diet, and the operation, a cure has been the consequence.\*

ON

was evacuated, as, likewise, above a pint and half of viscid pus, of a ropy consistence, which it would have been impossible to have removed, had not the trocar used, and tube, been very large. After the operation, *tonics* were prescribed, a dry, nutritious diet, and tight bandage, were used. The tumor, however, re-appeared, though the constitution appeared, for a short time, much amended. It was with considerable difficulty, and not until some sensations of suffocation, and, at times, syncope, had happened, that the patient would suffer a repetition of the operation, and it was obstinately refused, until the beginning of July, when a considerable quantity of serum and thick pus was discharged through the tube, from the left side. The patient received, however, temporary ease, and the last wound keeping open, a considerable quantity of serum and pus issued through the aperture, repeatedly, which always diminished the weight and pressure of the tumor. In this manner, the case proceeded, week after week, until the middle of August, when the tumor appearing considerably enlarged, the operation was warmly recommended, but the patient persisted obstinately in refusing this temporary assistance, and she died on the 27th of August.

On opening the body, in the presence of Mr. De Bruyn, Mr. Hooper, of the Infirmary, and other gentlemen, the appearances were as follows:

The *peritonæum* adhered to the tumor; the omentum, likewise, which was destitute of adeps, short and shrivelled.

The surface of the *small intestines*, on both sides, adhered to the inferior surface of the distended *ovarium*; by which they were greatly compressed.

The fluid in the *ovarium* was partly serum, coagulable lymph, and purulent pus.

The *liver* was much compressed, by the tumefied ovary, and pressed rather higher, immediately under the diaphragm.

All the abdominal viscera, more or less, were compressed by the tumor, by which the feces were retained.

The *uterus* was in a healthful state, and the left ovary and *Fallopian tube* were not in the least morbid; but, on dissecting the diseased ovary, there appeared distinct incysted tumors, which, however, communicated, containing fluid.

## CASE II.

\* In one instance, I was consulted by a young lady of 18, who had laboured under the disorder for above two years. I immediately advised the operation, which the ingenious Mr. Foster, surgeon of St. Thomas's Hospital, dexterously performed. Above  
two

## ON THE DROPSY OF THE UTERUS, OR WOMB.

BESIDES the dropsy of the ovarium, which is peculiar to the female sex, the *hydrops uteri*, or dropsy of the womb, is not uncommon. The species are different; sometimes the fluid is contained in cysts, and is either serous, coagulable lymph, or pituitous: in pregnancy, it sometimes happens between the chorion and amnion; in other instances, the fluid is loose in the cavity of the uterus, and is there retained by the closure of the *os uteri*.

## SYMPTOMS.

I. A tumor of the uterus, similar to pregnancy, lasting beyond the time of uterine gestation.

two gallons of fluid were evacuated; partly serum, partly coagulable lymph, in May 1794. The *cortex peruvianus* and acid elixir of vitriol, were prescribed, after the operation, and very tight bandage, with a girdle, that buckled. The lady was perfectly well, until about August 1795, a period of sixteen months; when the tumor re-appeared, owing, as the patient said, to a country jaunt into an aguish country, at which time considerable rains fell. The operation was again performed by Mr. Foster, in September 1795, and the bark and acid of vitriol, with an extreme *dry diet*, as before recommended; but what will be the result, time alone can determine.—In this case, it is remarkable that the lady laboured under no other complaint, appeared healthful, vivacious, and fresh-coloured.\*

In another instance, of Ann Roberts, at the Infirmary, which proved fatal from *spirit drinking*, the diseased *ovarium* adhered to the *peritonæum*, and so compressed the intestinal canal, that no feces passed for fifteen days previous to death, notwithstanding every mode, art could suggest, was used to promote the fecal evacuation.

\* Mr. Barnham, in Oxford Street, who attended as apothecary, informed me, that the lady took the remedies, and observed the diet many months, during which time there was not the least appearance of the disorder. *Quære.* Should not the remedies have been continued longer?

II. The

II. The breasts are *flaccid*, and have no distension of vessels, nor the turgency observable in pregnancy.

III. The direction of the tumor is, generally, from the *symphysis pubis* towards the *umbilicus*, and is most prominent in the centre and superior part.

IV. The fluctuation of fluid is obscure, or scarcely perceptible.

V. The *os uteri*, from obstetric examination, is not perceived to suffer those changes, which accompany pregnancy, and a coalition of its small aperture is sometimes discoverable.

VI. The menstrual evacuation is suppressed, but sometimes not.

VII. The other symptoms of dropsy, as diminished urine, œdema, pallor, debility, &c. accompany the *hydrops uteri*, but not always.

VIII. All the rules recommended to distinguish the dropsy of the *ovarium* of females from the ascites, and other dropsies, should be particularly attended to, to prevent error, in determining the presence of the *hydrops uteri*.

#### CAUSES.

The causes sometimes elucidate the obscurity of diseases. The dropsy of the womb succeeds violent falls and contusions, uterine hæmorrhage, or suppression; various læsions of the uterus, suppressions of the lochia; uterine inflammation; fluor albus, or whites; or any depraved state of the



fluids from visceral disease; intermittent fevers; hæctical affections; grief, and debilitating affections of the mind; rupture of lymphatics have been assigned as a cause. Whatever may have given origin to the disease, the immediate causes must be an *exhalation*, or pouring out of fluid into the cavity, which is not *inhaled* or absorbed. It is surprising that the uterus, which in its natural size, when unimpregnated, is no larger than a pear, should suffer such distension, as to contain three or four gallons of water, and yet, as in pregnancy, its coats often preserve their original and natural thickness.\*

#### CAUTION.

It is of the utmost importance that no error be committed in ascertaining this dropsy; for if any mistake should happen, and any operation be performed, death, immediate death, may be the consequence.

#### ATTEMPTS TO CURE THE HYDROPS UTERI.

In the *hydrops uteri* united with pregnancy, the delivery of the child and the rupture of the membranes prove a cure.

\* I knew an instance of this disorder not proving fatal for above twelve years; during which time the uterus became of a most enormous size. In another instance of supposed uterine dropsy, pure, *clear, coagulable lymph*, flowed from the vagina, at times; at other times, hæmorrhages happened. When the patient died, I had the body opened, and found the uterus filled with a hard, coagulated substance. This uterus is now in my possession, of a very large size. It weighed about eight pounds, when it was first removed, and did not adhere to any other part. The ingenious surgeon, *M<sup>r</sup>. Ford*, of Golden Square, opened this subject.



In other instances, the water, or fluid, has been evacuated through the *os uteri*, by accident, or by the coalition of the mouth of the womb giving way, through pressure, and the cysts breaking, containing the fluid.

Some women have had the disorder many years, without much inconvenience, except what hath arisen from the swelling.

It may be prudent, in these cases, to examine the state of the *os uteri*, from time to time; and if any thing like a sack should protrude, containing the fluid, the membrane should be carefully ruptured, avoiding any injury to the mouth of the womb, or *os uteri*; for the least scratch of the nail of the finger, on that part, would, in general, produce an ulcer, and after the most *excruciating tortures*, for months, or a year or two, similar to the thundering labour pains, as they are called, the disease would prove fatal.\*

\* See treatise on cancers of the breasts, womb, &c. Vol. I. of the Rational Practice of Physic. In the *St. Mary-le-bone Infirmary* we have had two instances of the *prolapsus uteri*, in which cases the uterus projected out from the vagina above, four or five inches, with swelling, inflammation, and ulcer, on part of the surface.—They were both cured by fomentations, the *pulvis alterans purificans*, the *pilula alterans fortior* of our formula, and have returned. It may be remarked that ulcer in the *parietes* or *fundus* of the womb do not cause pain, like an ulcer about the *os tincæ*, or mouth of the womb, which latter ulcer generally proves fatal, though not always, as I have fully proved. It might be a subject worthy of consideration, in the actual dropsy of the uterus, whether the *paracentesis* might be performed, if we were certain that its peritoneal coat adhered to the peritonæum. The disorder is rare, and, therefore, this fact would be difficult to ascertain, and, at most, would only afford a short relief.

It should be remarked, that no operation can be reasonably attempted in the dropfy of the womb, for the *trocar* piercing through the parietes of the uterus, would probably be as fatal as in pregnancy; only that in the latter the mother and infant have both perished, while in the former the unfortunate female might be the sacrifice to such rashness. The dropfy of the uterus, therefore, of which there are many instances on record, unless curable by nature, or some accidental or favourable circumstance, little can rationally be performed by art.\*

\* *Blanchard* gives an instance of a dropfy of the womb which contained 85 pints of water. Many instances are mentioned by other authors of this disorder. *De Graaf* gives an instance of *hydrops uteri* of 25 years standing. *Donatus*, *Cardanus*, *Riverius*, *Piso*, *Bonetus*, *Lieuteaud*, *Sauvages*, gave singular instances of this disorder.

In Vol. I. of the Rational Practice of Physic, concerning female diseases, are the following remarkable dissections:

A lochiorum suppressione, inflammatio, mors quinto die.

1. *Uterus* ingens ponderis 100 librarum qui aquæ subcruentæ octo & viginti pintas continebat, præter quatuor molas.

2. *Uterus* octoginta libras ponderans, ichore flavo, materia adiposa & oleaginosa infarctus.

3. *Uterus* fere universam abdominis cavitatem implens. Infarctus materia quadam rubicunda: ejus latera partim erosa, adeo ut in pluribus locis ad chartæ tenuitatem diducta essent.

The publishing dissections, of which there are to the amount of many hundreds, in the female, nervous, diseases, &c. has been censured by some writers. The motive, and only motive, for delivering those numerous dissections in Latin, was on a principle of humanity, lest those unfortunate persons who laboured under nervous and bilious affections might be alarmed, and their feelings agitated with additional unhappy reflections on their truly miserable disorders, by reading the appearances after death.

THE HYDROCELE, OR WATERY RUPTURE, AS IT HAS  
BEEN IMPROPERLY CALLED.

THERE are three species of what has been called hydrocele.

1. The *hydrocele* of the integuments of the scrotum, when a fluid may be accumulated in the tela cellulosa of the scrotum, all the scrotum and sometimes the penis, are œdematous, and retain the impression of the finger, similar to other cellular dropsies.

This species of dropfy is at times idiopathic, in which it is easily cured, by punctures and the discharge of the *serum*, provided the patient's health be not otherwise impaired.

The cellulous dropfy of the scrotum is likewise *symptomatic*, accompanying, sometimes, the ascites, the *anasarca*, or other dropsies, and is then a dangerous additional symptom.

The *cure* of this last species is frequently impracticable, unless the causes of the dropfy, of which it is only a symptom, be removed.

*Punctures*, in these cases, generally prove fatal, by a rapid *mortification*; therefore caution is necessary, and palliatives, as fomentations, suspending bandage, rest, &c. are useful, whilst the causes are attempted to be removed; but whatever methods may be pursued in confirmed dropfical habits, when the blood be much depraved and its crasis destroyed, they seldom prove successful.

2. The

2. The *scrotal hydrocele*; when water in the cavity of scrotum forms a round tumefaction, or inflation, similar to an inflated bladder. The penis, in this species, is rarely affected.

3. Hydrocele of the *tunica vaginalis testis*; water effused in the vagina of the spermatic chord, or in the vagina of the testicle. In the first instance, the fluid is seated towards the inguinal ring; in the second instance, the tumor is oval, and is formed toward the bottom of the scrotum.

The *cure* of both is first to be attempted by dry fomentations, by embrocations, as lime water, with spirits of wine and camphor, by *spiritus Mindererii*, linimentum saponaceum, &c. Internally; *tonics* should be prescribed liberally, dry diet, and a suspending truss should be worn, which uniformly presses the whole tumor, with compresses, dipped in the above or similar applications. By these means, recent cases are sometimes cured, but when these remedies fail, as they often do, then the other modes of cure, by surgery, should be applied.

The accumulation of the fluid in the hydrocele of the *tunica vaginalis testis*, &c. is caused by the same means as dropsies of other parts, that is, by the *exhalation* exceeding in quantity the absorption or inhalation. The evacuation of the fluid is performed by the following methods:

1. By the *paracentesis* into the tumor, either by a lancet, or by the small trocar; different surgeons use one or the other, as may be most convenient. This rarely, though sometimes, proves a radical cure.



cure, and in some instances the operation has been repeated many years, whenever a fresh accumulation may prove troublesome.

2. By the caustic, which has proved, oftener than the last method, a radical cure.

3. By the dissection of the whole serotal cavity, this may effect a radical cure, but the method is dangerous, and may prove fatal.

4. By a *fetou*, which proves a radical cure, and is said to be safer than any other method yet invented. All those methods come under the province of surgery.

The intentions of the *fetou* are first to evacuate the fluid, and afterward to excite a light inflammation, by which means, the cavity which contained the fluid is destroyed by the adhesion and union of the sides which previously formed the cavity. The cavity being thus destroyed, no future accumulation can happen, or rarely returns.

The injection of some light irritating fluid, as *red port*, &c. has lately been used, to excite the necessary inflammation, &c.; but for the particulars of these, and other methods, it will be proper to consult the latest writers in surgery.

#### HYDROPOPTHALMIA.

THE *hydropopthalmia*, or dropfy of the eye, has been amply considered in the treatise on the different diseases of the eyes, volume the third of the Rational Practice of Physic, therefore here it is omitted.

## HYDRARTHROS, OR DROPSY OF THE JOINT.

THE *hydrarthrus* is a dropsy of joints; but most frequently this disorder attacks the knee, circumsccribing the capsular ligament, appears white and softish, and does not retain the impression of the finger. It injures motion, and generally arises from a morbid collection of the synovia of the joint.

Perpetual blisters should be applied for many months, to the whole knee, which, in some instances, have produced a cure. Setons have, likewise, been successful; but if the disease should arise from serophula, it should be treated by mineral alteratives internally, and in debilitated habits, by bark, steel, &c.; but, after all, the most judicious efforts to cure this white swelling of the knee frequently prove abortive.\*

## TYMPANITES, OR COLLECTION OF AIR.

THE tympanites is an accumulation of air in the intestinal canal, or in the cavity of the abdomen.

It is common to treat on this disease amongst the species of dropsy, though, perhaps, improperly.

\* I have cured some white swellings by perpetual blisters and the most powerful mineral alteratives, when not too confirmed; but these remedies must be long continued: in many instances, these cases are incurable, and amputation alone can remove the disease—dreadful auxiliary!

If the tympanitis be in the intestinal canal, it is sometimes cured by correctors of air, joined with carminatives. Magnesia, or lime-water, and the warmest aromatics, are proper; some have recommended *Cayenne* pepper, with success. If the distending air should be in the cavity of the abdomen, it commonly arises from the putrefactive state of some viscus, in which case, it generally proves destructive.

Surgeons have recommended the *paracentesis* in this disorder; as the fate of the patient is almost certain, and as the puncture cannot do mischief, but may give temporary ease, skilful surgeons should be consulted, to determine whether the operation be adviseable.

#### ON THE AIR, EXERCISE, GENERAL RULES OF DIET, &c. OF DROPSICAL PATIENTS.

THE *air* chosen should be dry and clear, such as is observed at *Hampstead* and *Highgate*, near London; but if asthma, or any oppression of the chest, should accompany the dropsy, the mild salubrious air about the middle of *Kentish Town* will be better; as this air has cured coughs and consumptive complaints with little or no medicine; and persons, who cannot breathe without difficulty, in other situations, find respiration easy in this village; which may be attributed to its being surrounded by hills, on the north and north-east, &c. *Knightbridge* and *Brompton*, being defended by London, in some

measure, from the east and north-east winds, agree with pulmonies.

The *exercise* of dropfical patients should be as much as each individual can bear. Riding on horseback, in a carriage, and walking, should be alternately used, as times, seasons, and circumstances permit. The torpid should be roused; for the dropfy produces indolence, and sometimes insensibility, to the pressing dangers; but in all cases, the state of the disease, the strength of the patient, seasons of the year, and former habits of life, should be considered. What may be salutary to one person may be injurious to another.

The *diet* of dropfical patients cannot be too *dry*. By avoiding drinks of all sorts many cures have been performed without medicine, and the most judicious treatment has failed, when patients would not conform to rational and salutary advice. All mankind drink much more than is necessary.\* The dropfical have a continual *thirst*, but sucking tamarinds, oranges, pulp of fruits, drinking small portions of liquids acidulated with the *muriatic* acid, where the *vitriolic* might be improper, as this latter is, in all hepatic complaints, may be useful, and quench thirst, without debilitating the already relaxed state of the *tela cellulosa*. How it could enter into any rational mind to recommend large *potations* of *water* in dropfies, where the parties are already drowning in that fluid, is difficult to determine;

\* *Spirit drinking* is the destruction of our lower orders of people: it would be an excellent change, if the *distilleries* were converted into *breweries*.



except that, *nihil est tam absurdum, quod non aliquando dixerit, vel philosophus, vel medicus male famus.*

Besides the abstinence from liquid diet, all vegetables should be refrained from, and every food that is not very nutritious; whatever is likely to generate *gluten* and *red* particles of blood should be recommended, and every food that cannot answer these purposes be strictly avoided.

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## C O N C L U S I O N.

THE introductory part of this Treatise was written to prevent the influence of visionary conjectures in the practice of medicine: for they have lately had, and continue to have, a baneful effect in the actual treatment of diseases. The exhibiting to view the various systems which have prevailed, and the sectaries that have led the art of medicine into endless error, may operate as a caution to future inquirers and to future believers, and prevent the mischiefs arising from the crudities of rash speculators, without practical science, or of whimsical practitioners without strong reasoning faculties, or sound logical judgment. The forcing incongruous doctrines into the art that have little or no analogy with the human body, either in a state of health or disease, and which are as dissimilar as light and dark, merits the severest censures; but if students were not so avidious to believe, lecturers, writers, and

speculators, would be more cautious in daring to apply *individual* cases to *universal* practice; and were practitioners more circumspect, they would not depart so readily from established truths, in favour of uncertain opinions and false doctrines.\*

In early ages, superstition took the lead, and medicine was blended with polytheism: afterwards,  
with

\* The abuse and frequently destructive use of *opium*, lately, is shocking to reflect on: it has often proved fatal, or seriously injurious, in *pleurisy*, *peripneumony*, *asthma*; in difficulty of breathing, *dyspnœa* and *orthopnœa* of the dropical. In the *cholera morbus*, *fluxes*, &c. before the irritating causes have been removed. In phrenzy, delirium, and nervous affections, female and children's diseases, &c. words cannot express what mischiefs have ensued from the ill-timed use of *opium*. Of all the striking examples of irrational practice, that of giving *opium*, or *laudanum*, to females, during *labour*, appears the most ignorant. The delivery of the infant depends on the *force* of the labour pains excited in the uterus, and assisted by the pectoral abdominal muscles and strong inspirations, &c. &c. To counteract these *natural* efforts of the mother, in expelling the infant from the womb, by *opium*, is to oppose nature's wisest laws, and must prolong the labours at the hazard of killing or injuring both infant and mother; the former before delivery, the latter by the checking of the *natural*, *lochial*, and *intestinal* evacuations. From such sources, and from leaving the *after-burden*, unnecessarily, after the delivery of the infant, have apoplexy, delirium, and dangerous puerperal fevers, been produced, which have ended fatally, or greatly impeded the recovery of women in child-bed, as I have formerly observed, in the 1st volume of *Female Diseases*, &c. &c.

Dreadful have been the consequences of introducing speculations into the practice of midwifery, projects which appear more the effects of a poetic conceit, than deriving from that judgment which should always second and assist, instead of impeding the wise operations of nature. There are other projects equally reprehensible, amongst which none demands more immediate censure and prohibition than the dangerous doctrines in venereal complaints lately promulgated, by which thousands are, and will be irreparably injured, and their lives rendered truly wretched. A person unacquainted with the history of the *venereal disease*, might imagine the use of astringent injections was new; but the same projects were practised a century ago, to the injury of thousands,

with an ostentatious shew of splendid erudition, physic wandered through many inextricable labyrinths of Pythagorian, Aristotelian, Corpuscularian, Cartesian, Spagyric, and Newtonian philosophy, according to the fashion of the times. Lately, it has taken an eccentric trip into the aerial regions of pneumatics and chemical analysis. It is sincerely hoped that it may soon find a solid resting place, founded on anatomy, physiology, and universal practical facts.

It is not philosophy, the noblest and comprehensive of all human sciences, that is blamed, but the

sands, and the practice was laid aside, from a conviction of its deleterious tendency. Why the methods which have been so repeatedly mischievous in 1695, and after, should be less injurious in 1796, it would be difficult to determine. I daily see the miserable victims to these practices, which Mr. *Daran*, of *Paris*, now no more, has, in my presence, severely reprobated, though he acquired immense practice by the consequences of *astringent injections*, and who was the greatest judge in these matters that ever existed.

The practice of using *astringent* and *vitriolic injections*, in the recent venereal disease, has, to my own knowledge, been productive of effects that are horrid, and even fatal; some of which shall be shortly published, to prevent those mischiefs, if possible, which may sensibly injure the present and rising generation. The modes of treating, some serious consequences arising from the suddenly checking the venereal discharge, as *obstructions of urine*, sometimes incurable, ulcers of the *prostate gland*, abscesses, fistulous ulcers of the *perineum*, scirrhous, and cancerous testicles; the miserable discharge of urine through three or four passages in the penis and perineum, arising from the effects of *astringent injections*, may be useful, and induce some surgeons to be more circumspect in treating recent venereal complaints, and not to impute the dreadful consequences to every thing but their own hazardous prejudices. The same methods were destructive to millions, a century ago. Claps may be safely and promptly cured, by mild methods, without risk of future injury, by the remedies I published 30 years ago; but if some surgeons will, in compliance to the unreasonable expectations of patients, expedite a supposed cure at all hazards, millions of *bougie* cases must be the consequence.



officious conduct of uninformed dabblers in medicine, who are continually disturbing the art by the misapplication of every new discovery in philosophy to the art of physic.

In the theoretical examination of the dropsy, the parts most subject to disquisition are explained, and the causes of different species of dropsies determined and elucidated by facts and reasonings from evident truths, which, it is presumed, will be admitted by all those who will pursue the same methods of inquiry. Morbid viscera, the diminution or laxer state of the *gluten*, the partial absence of the healthful *red particles* of the blood, and the superabundance of serum in the cellular structure, or cavities of the human body, and the *exhalation* exceeding the *inhalation* or absorption are proved conjointly to be the principal causes of hydropical affections. A review of the methods of cure by *violent purges* and *diuretics*, and the observations annexed, tend to prove that those remedies are often inadequate to the removal of dropical causes: they are prescribed, *sed frustra ad mortem usque*. As evacuants, they are allowed to be useful; but the cure of dropsies requires a restoration of *gluten*, to give firmness, stricter coherence, and a more powerful resistance, in the solids to the superabounding fluids, the reproduction of *red particles* which are scarcely perceptible in the aqueous deluge and increase of serum and pallor; the removal of visceral obstruction, laxity, &c.: all which grand objects are best ob-

tained



tained by mineral alteratives, and tonics of the vitriolic or chalybeate kind, bark and bitters.

These rational modes of cure have many years proved successful in an extraordinary degree, both at the St. Mary-le-bone Infirmary and in private practice; and it is ardently inculcated, to apply bracers, &c. and a nourishing dry diet, on the first appearance of *swelled legs*, or any other symptom of an approaching dropsy. The truths advanced, on the difficulties medicine has often to encounter in the cure of confirmed dropsies, may not be so consolatory to the afflicted as a collection of *dropscial cases*, in which fortunate events are ostentatiously displayed, and the more numerous instances of fatality concealed. *Partial* case writing has done much injury to the art, and has led the inexperienced to place confidence in numerous absurdities: it has, therefore, been considered most eligible to deliver the collective result of extensive and long observation, and to bring to view the unfortunate and fortunate events which practice will ever experience under similar circumstances. It is no reproach to the salutary art, that it cannot effect impossibilities; but it argues practical ignorance, or deception, not to know, and candidly declare, what the art has to contend with, or to delude mankind with irrational hopes. A thorough knowledge of the real causes of dropsies may lead reflecting men not to give implicit credit to the numerous cures that are reported to have been effected by *single*, and often *insignificant* remedies; or by  
means

means quite disproportionate to the important and various treatment the disease requires.

In the explanatory principles, prognostics, and treatment, of dropsies, may be discovered many new reflections; all which have arisen, not from mere closet speculations, or false theories, but actual practice, extracted from a register of the unfortunate events, and treatment of dropsies. A physician should draw all his conclusions from practical life, not from visionary contemplations, or from the sportings or flights of fancy.

*Bleeding*, though contra-indicated in dropsies, may, in some instances, be admissible, where the patient is threatened with suffocation in the dropsy of the chest, joined with *asthma*; for it sometimes gives temporary, though not permanent relief: but to puncture the *pericardium* in the *hydrops pericardii*, as some have advised, is an operation replete with danger; it seems conveying the ideas and practice of the dissecting room into the bosoms of existing human beings.

*Swellings* of the legs are greatly relieved by the *acid baths*, recommended, in the gout, for the feet, composed of the *marine acid* and tepid water; but they are not proper in all cases.

In the incysted dropsies, and in the female dropsy of the *ovarium* and the womb, are delivered many reflections and descriptions, hitherto not much attended to, which will render the comprehension of those diseases easy to all who are previously acquainted with the anatomy and physiology of the parts,

parts, and by the liberal and candid, will be perceived the necessity and utility of the new-invented instrument recommended.

Some pointed animadversions may appear in different parts of this treatise, on several common practices, in treating dropical and other disorders; but it should be recollected, that errors cannot be rectified before they be discovered, and that practitioners who have not had great opportunities of seeing a multiplicity of facts, cannot easily detect, much less expose, or remedy, the defects of the salutary art. It were to be wished practical physicians wrote oftener; for such conduct would prevent the inexperienced from obtruding their visionary crudities into the art. If any men merit credit, it is those whose long experience may be supposed to have corrected the errors of an early education, by judicious and unprejudiced observation. It should be remarked, that though defects in practice may be exposed, individuals are spared; for it is not persons, but things, which become the objects of consideration. If any prejudiced or illiberal opponents should arise, who feel themselves hurt by an exposure of some practices, because it attacks their favourite systems, which are highly reprehensible; it is not the author, but the parties themselves, who make the application, and they may be known by their violent opposition to truths; which they are either too proud to examine, or incapable, through many original errors, to comprehend.

By seriously considering what hath been advanced, it will be easy to ascertain the rationality of any new proposal, or new remedy for the removal of such complicated evils as give origin to dropsies: it will appear that neither a mere *diuretic*, *cathartic*, nor *sudorific*, nor any single remedy, nor narrow practice, can fulfil the various intentions of cure requisite in confirmed hydropical disorders; though in slight recent cases, with sound viscera, their removal may be, without much difficulty, effected. — All that has been observed in many hundreds of cases has been concentrated in this treatise, and it is sincerely wished that it may obtain the candid attention of the medical profession, and ultimately prove beneficial to the afflicted.



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ON THE  
D E C A Y  
OF THE  
HUMAN CONSTITUTION  
IN THE  
DECLINE OF LIFE.

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IT is a common mode of expression, when persons advancing in years shew visible marks of a declining habit of body, to say *the constitution is breaking up*; and it is often inferred by observers, that it is a previous token of approaching disease, that terminates, sooner or later, in death.

No changes of the constitution can happen, without some cause; but this species of change is frequently so gradual, as to be almost imperceptible, and the causes of the alteration are seldom investigated; because the sufferer, not perceiving any specific disease, and being disinclined to acknowledge the decays of nature, if even some change be perceived, very often conceals the first symptoms of an approaching dissolution.

## THE SIGNS.

The signs of the breaking up of the constitution are as various as the habits of body affected, and, therefore, scarcely describable; but they are considered under the following heads of different constitutions, in which mode is treated most diseases in the Rational Practice of Physic.

|                       |                       |
|-----------------------|-----------------------|
| STRONG,               | WEAK, or debilitated, |
| FLORID,               | PALLID,               |
| CORPULENT,            | SLENDER,              |
| VIVACIOUS, irritable, | INDOLENT, more insen- |
| and abounding with    | sible, and torpid.    |
| sensibility,          |                       |

These different habits and forms of body, these varieties of what is called mind, are evident to most common observers. The more minute divisions and subdivisions existing amongst human beings are so innumerable, that the penetrating eye of *Lavater* would fail in attempting a written description of many thousands of species that appear in the terrestrial globe, all different from one another.\*

The evident marks of an approaching dissolution, or the breaking up of the constitution, must

\* The nice discrimination of the differences of one individual compared with another in a state of disease, is the very soul of practical medicine, and shews the absurdity of all hypothetical projects and confined systems of inexperienced projectors.

be collected from each individual; for, in proportion as each person departs from the *accustomed* appearance to another, that shews marks of a declining state of health, without any specific disease, in the latter part of life, so may it be pronounced, that the sufferer approaches slower or faster to the absolute extinction of human existence. The most visible signs are in the *countenance*, where frequently appear some symptoms of anxiety, dissatisfaction, and gloominess; evident marks of age in the face, which had not before been perceived, and some change in the colour of the skin, or deviation from the former complexion. Cheerfulness and gaiety seem obtunded, lose, in some measure, their disposition to please, and if appearing, they are forced with uncommon efforts, merely out of complaisance, or to conceal the ungrateful sensations that rankle within. A listlessness to action, rather approaching to debility, is gradually perceived; several bodily and mental functions are tardily performed, and, in a manner, contrary to their former energy. Sometimes a wasting, in other instances, according to constitutions, a loose and spongy flaccidity of body is imperceptibly induced; the former leads to atrophy, or consumption, the latter to dropsy. The legs gradually begin to totter under the weight of the body; the limbs cannot act as usual by the command of the will, and over exertions to conquer these bodily defects occasion, in some, a sensation of giddiness of the head.

## MENTAL CHANGES.

THE mind that before appeared serene, and under the dominion of reason, becomes irascible, on trifling occasions; pettish, and sometimes violent: this happens to the lively; the less irritable appear more dejected, silent, or torpid, and most do not partake of the pleasures of life with their usual alacrity. The mind is clouded, or irritated with strange conceits, which never existed in the same person, and which the parties are ashamed of acknowledging: in short, the countenance, the body, the mind, all suffer, more or less, without any manifest nominal disorder in that intermediate space of time, which passes between the usual and accustomed individual state of health, to the commencement of that absolute affection which terminates in death.

## THE AGE WHEN THE CHANGES HAPPEN UNCERTAIN.

THE *age* in which these changes make their appearance, previous to death, is various, in different constitutions and sexes, and the time of their duration, before a specific disease be present, is widely different; for the breaking up of the constitution in some is so gradual, as to elude the observation of the most penetrating, for one, two, or three years; while the advances in other instances are so rapid, that



that persons of little observation will easily discover the change.

#### DIFFERENT IN DIFFERENT HABITS.

THE *strong* and robust diminish in strength, the *weak* become more feeble, the *florid* lose their healthy colour, and the *pallid* become more pale, united sometimes with a darker cadaverous tinge; the *pleasant face* becomes furrowed and extenuated; the *corpulent* become thin, and the *slender* naturally thinner; the *vivacious* and lively become irritable; but some are mopish and dull, and the naturally *indolent* and torpid become more insensible, either to pain or pleasure.

The general descriptions of the gradual ravages in the constitution, previous to diseases, that prove fatal, might be augmented *ad infinitum*; but these representations are sufficient for the intelligent medical observer, and as brevity is intended, prolixity shall be avoided.

#### OF THE CAUSES OF THE DECAY OR BREAKING UP OF THE CONSTITUTION IN THE DECLINE OF LIFE.

THE animal machine, constantly during life, is subject to attrition and daily loss of its constituent particles, and admits of reparation by the nourishment which the industry of man hath discovered. It has its ages of infancy, of increase, which is youth,

youth, its *stadium* or *acme*, which is manhood, and declination, which is old age, independent of various accidents and diseases.

The continuance of health of body and vigour of mind, *mens sana in corpore sano*, depends much on modes of life and undisturbed and judicious nutrition, and though health varies almost in every individual constitution, whether naturally corpulent, lean, robust, or feeble, florid or pale; yet the purposes of life, in all these different habits, are fully answered. Health itself has a variety of appearances in different persons and constitutions. The necessary functions and actions for preserving life and health last much longer in some than in others, and there is as much difference in the degrees of strength of human beings, as between the waving osier and the firm solidity of the oak.

In the decline of life, nutrition gradually diminishes; the different parts appropriated to different functions imperceptibly lose their original powers; the parts become worn by long attrition, the nervous powers become more obtunded, and whatever depends on their influence is rendered less active; the *tela cellulosa* becomes more relaxed in some, and more contracted in others; arterial action diminishes, and the solids receive not their due portion of *albuminous* regenerating fluid; gradual, though universal debility is the consequence. The mind attempting to act on the body, imperceptibly, as it were, approaching to a final dissolution, perceives

at first slightly, and afterwards more powerfully, the decays of age or decrepid feebleness; some specific, partial, or universal disease, follows, by which the vital flame is sooner or later extinguished.

ON THE RETARDATION AND PREVENTION OF THE  
DECAY OF THE CONSTITUTION IN THE DECLINE  
OF LIFE.

TO assert, that human beings cannot prolong their lives by a judicious choice of diet and temperance, and that the art of medicine does not save the lives of thousands, who, without skilful assistance, would perish, in various diseases, is the reverse of truth. Assertions, however, of this nature, though contradicted by numerous facts, are not uncommon; but they are the irrational opinions of ignorance, or the wild effusions of bigotry. Is it not true, that fractures and depressions of the skull, hæmorrhage from certain arteries, the bubonocèle, various mortifications, the stone, and other diseases, would absolutely prove fatal, were it not for the interposition of skilful surgery? Would not thousands annually perish in inflammatory, putrid, and chronic disorders, were it not for the skilful administration of medicine? No human being, capable of observing and reflecting, who has but slightly practised the humane art, can deny its utility and powers on various occasions. Life can be frequently prolonged, and the decay of the constitution

P
tion



tion be retarded, by its powers, in many instances, and intemperance, ignorance, and obstinacy, may shorten human existence. Men become, sometimes, their own executioners. Old age and a decaying constitution, cannot obtain the vigour and powers of youthful life; but the breaking up of the habit, on its first appearance, may be often prevented, the down-hill of life rendered comfortable, and death long warded off by the subsequent methods.

The deviations from the natural habits, mental character, individual varieties and propensities, being first judiciously considered, the general treatment of the decay of the constitution will rationally fall under the annexed arrangement.

The *strong* and *robust* becoming insensibly debilitated, require that the loss of *albuminous particles* flowing from the arteries for the purpose of nutrition, should be restored, for debility often arises from their diminution. Digestion, nutrition, chyliification, salutary sanguification, being interrupted, or partially destroyed, require tonics, bitter stomachics, spices, and vitriolic preparations. At the same time, mineral alteratives are necessary, to render pervious the minuter circulatory systems, and an occasional stomach laxative may be necessary.

The *weak*, rendered more debilitated, require similar remedies to the former, to which may be added the preparations of *zinc*. These should avoid all diluting, watery drinks, and indulge in *port*.

The



The *florid*, who have lost their usual healthful complexion, are easiest relieved, and they have the attacks of old age removed, or retarded by the vitriolic acids and bitters, or by volatiles and bark, particularly if they be afflicted with flatulency.

The *pallid*, in which red particles are absent, are best supported and relieved by *chalybeates*; the tincture of the flowers of steel, to forty or sixty drops, may be given, in three table spoonfuls of water, ginger, or chamomile tea, two or three times a day. *Tunbridge* and *Hampstead* waters, in summer, are likewise very beneficial. The hydrargyric preparations, in extreme small doses, with aloetics, are proper, two or three times a week; or the *hydrargyrous*, with *antimonial sulphurs*, soap, and rhubarb, formed into pills, may remove those obstructions, that diminish nutrition and secretion of bile, &c. many forms of which may be found in the treatise on female and nervous diseases.

The *corpulent*, being most prone to hydropic complaints, may be treated in a manner similar to the recent dropsy, which may long prevent that fatal distemper.

The *lean* or *slender* suffer most from contraction, both of the *tela cellulosa*, the mouths of minute arteries, and hepatic obstruction, with costiveness: therefore, the *hydrargyric* preparations, with *antimonial sulphurs*, are most efficacious, when cautiously and judiciously prepared, and administered night and

morning;\* *chalybeates*, in the intermediate times of the day, with bitters, or the *myrrh*, *sal martis*, *sal tartari*, dissolved in any proper vehicle, or bitter infusion, are efficacious.†

The *vivacious* and *irritable*, according as they approach to the antecedent constitutions, are to be treated partly by what has been recommended; to which may be added *Hoffman's anodyne* liquor, in solutions of camphor; but as nervous irritability has been elaborately treated on, in the treatises on nervous and female diseases, those who wish to peruse a more minute investigation of every symptom relating to what are nominated spasmodic and nervous, may consult the first and second volume of the *Rational Practice of Physic*.

The *indolent*, *more insensible*, or *torpid*, require rousing by active, *aloetic* laxatives, by air, exercise, and lively conversation. If they be *pale*, *chalybeates*, *myrrh*, and bitters, are useful; if more approaching to *florid*, the opening medicine should be *magnesia*, in water, on which should be drank a little *lemonade*, punch, or negus, after the *magnesia* has been taken. The effervescence and neutralisation of *magnesia*, and the diluted acid of lemon in the stomach, often proves agreeably laxative,

\* These medicines cannot be depended on, unless prepared at *Apothecaries Hall*, and unless they be triturated, for at least twelve hours, in a glass mortar, or *levigating machine*.

† The efficacy of these preparations depend on the proportions of the salt of tartar and salt of steel; about six, eight, ten, or twelve grains of the former, to three, four, five, or six grains of the latter, is the mode of exhibition in a dissolved state, confirmed by long experience.

and acts powerfully as a diuretic. In other respects, the treatment recommended to the robust, weak, florid, pallid, corpulent, slender, &c. should be adopted.

## THE MORNING

Should be spent, after a light breakfast, with half the usual quantity of liquid food, in moderate exercise, if possible, in the open air.

## AFTERNOON.

Before dinner, some stimulating aromatic and tonic bitter should be taken; or five grains of rhubarb, powdered, with twenty grains of powdered ginger, or *sal martis*, and some bitter extract, in the form of a pill, &c.

## AT DINNER.

The accustomed diet to be used, but the quantity of humid food should be diminished. What may be evacuated in the prime of life, is retained in old age, to the injury of the constitution.

## WINE.

Those who have been guilty of vinous excesses should retrench their quantity, and impart to the nerves of the stomach an equal degree of warmth and energy, by spices, as ginger, &c. Cayenne pepper, cinnamon, cloves, mace, nutmeg, &c.



## EVENING AND NIGHT.

Cheerful amusements and pleasant conversations assist in prolonging life; in which every individual should pursue his taste. Those which are most innocent, amongst which might be mentioned music and dramatic scenery, are most excellent; those which perturb the mind, or excite hope or fear, as high gaming, are injurious. Debaucheries of all sorts are death to the aged, as likewise over-exertions.

These few experienced rules, on the modes of preventing the common ravages of time, suspending the decay of the constitution, and prolonging life, or rendering the latter moments of human beings more comfortable, will frequently answer the intended purposes, if candidly and skilfully applied.